

Practical Boat Owner®

MAINTENANCE · PROJECTS · GEAR REVIEWS · SEAMANSHIP · CRUISING

KEEPING YOUR ENGINE COOL

Step-by-step guide to servicing your cooling system

TESTED

TENSION GAUGES

DIY rig tweaks with repeatable results

PLUS Flip-down dinghy wheels



Cure for a cracked encapsulated keel



Fixing up an old car engine as a spare



Making a safe space in a tender for a toddler

PLUS How Mini Transat racers influence cruising

MOORING UNDER SAIL

Tips, tricks and techniques

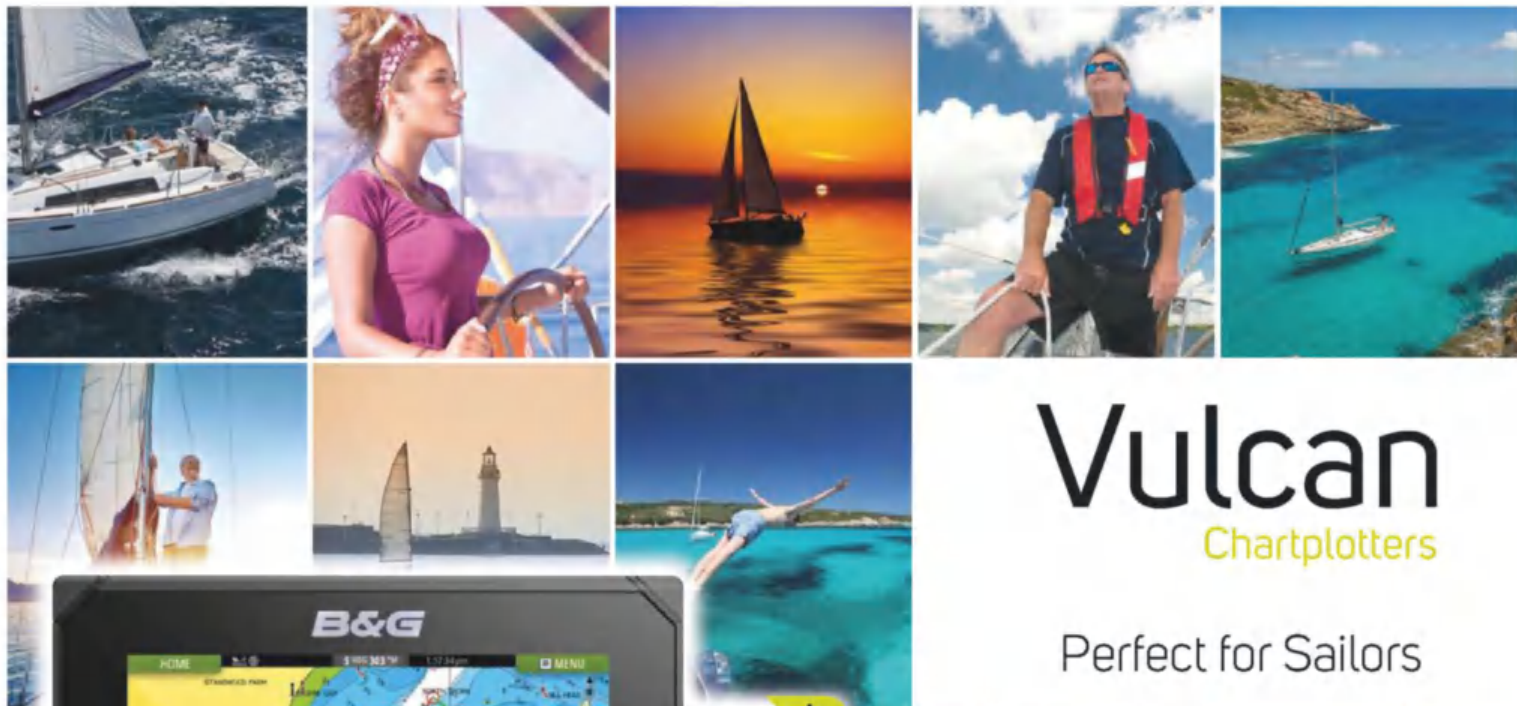
INNOVATIVE LIFTING KEEL

Practical improvements to a gaff cutter

MARINA GUIDE

Costs and facilities near you





Vulcan

Chartplotters

Perfect for Sailors



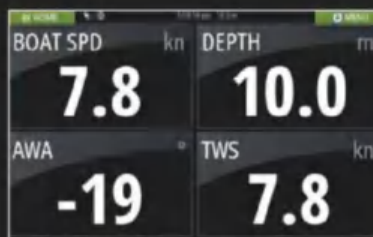
The must have for all sailors

This versatile chartplotter with multi-touch and pinch-to-zoom, now available in a 5" or 7", comes packed with innovations for sailors. Vulcan integrates with your on board instruments to unlock award-winning sailing features including SailSteer™ and Sailing Time. With built in Wi-Fi, keeping up to date with all the latest sailing apps and services is easy. It is easy to expand the Vulcan series by adding components such as ForwardScan, autopilots and entertainment hubs.

GPS 10HZ GPS	SAILINGTIME
MULTI-TOUCH	PILOT CONTROL
NMEA 2000®	WIND PLOT
SAILSTEER™	GOFREE™ SHOP
LAYLINES	FORWARDSCAN®



Chartplotter



Instrument Display



Sailing Features



www.bandg.com

B&G

A Passion for Sailing

PBO Contents

Welcome to the April 2016 issue

REGULARS

- 5 Waiting for the tide**
The editor's welcome to this month's PBO
- 6 News**
Storm Imogen batters parts of Britain, PBO Project Boat winner announced... and more
- 10 Regional news**
Improvements to Ros an Mhíl Harbour, Carlost facilities boost... and more
- 12 Readers' letters – your views**
- 14 Dave Selby**
Maldon becomes Tinseltown
- 16 Sam Llewellyn**
It's crane day in the yard
- 18 Andrew Simpson**
Take care to guard your own
- 86 Ask the experts**
Getting to the bottom of paint blisters, plus more reader queries answered
- 91 PBO products and services**
Books and plans from the PBO Shop
- GEAR**
- 26 Flip-down dinghy wheels**
Which wheels are best suited to different types of terrain?
- 53 New gear**
PBO looks at the latest marine products
- 92 Rig tension gauges**
DIY rig tweaks with repeatable results

PRACTICAL

- 74 Cure for a cracked encapsulated keel**
Repairing a split keel on an Albin Ballad
- 70 Fixing up an old car engine as a boat spare**
Repurposing an old Maestro lump
- 78 Retro-fitting spring cleats**
AND sorting out loose locker lids, plus more reader projects and tips
- 82 Keeping your engine cool**
A step-by-step guide to servicing your cooling system
- 90 A toddler-friendly dinghy**
Make a toddler-safe space in a dinghy

BOATS

- 20 How Mini Transat racers influence cruising**
Fresh ideas from the cutting edge
- 61 Innovative lifting keel**
Practical improvements to a gaff cutter

SEAMANSHIP

- 28 Mooring under sail**
Tips, tricks and techniques
- 60 More Sticky situations**
Seamanship tips from Sticky Stapylton
- 80 A day I'll never remember**
A reader succumbs to transient global amnesia while at the helm

CRUISING

- 66 Rhyl life**
Times are changing for this historic harbour in North Wales
- 98 Cape of Storms**
200 miles from Cape Town, a reader prays for a change in wind strength or direction

2016 Marina Price Guide
Costs and facilities near you – see page 34

The 2016 Marina Price Guide
Your comprehensive guide to 2016 costs and facilities around the British Isles. Listings compiled by Lewis Pritchard and PBO Junior.



96 Budget dinghy repairs

- 96 Budget dinghy repairs**
Transforming a neglected, rotting, 12ft sailing dinghy into a perfectly safe and serviceable craft
- 110 Anchor locker design**
Hints and tips from the PBO Sketchbook



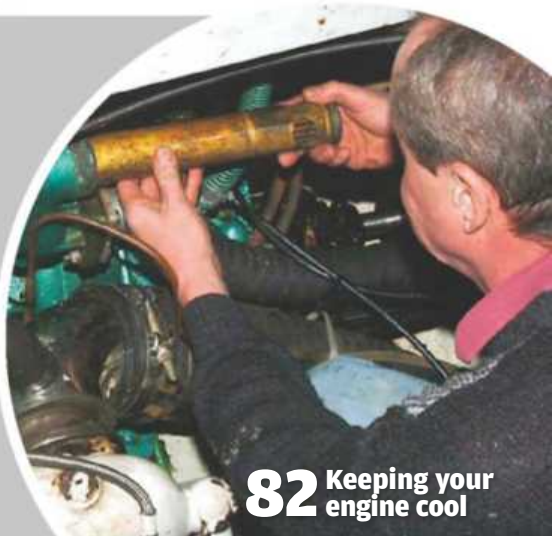
Cover photo: Cascadeur, a Jeanneau Sun Voyager



20 How Mini Transat racers influence cruising



66 Rhyl life



82 Keeping your engine cool

Why splash out more than you need to on boat insurance?

We're turning the tide on how you buy insurance

With our fast, online quote builder you can shape your insurance quote entirely around you and your boat. No need to pay for any unwanted extras.

In fact, we're so confident we offer the best value boat insurance, we promise to beat your renewal quote or we'll refund the difference.

And that's not the only reason to drop anchor with us:

- Save up to 25% with our no claims discount
- Enjoy 0% APR on monthly payments
- Get a quote online in seconds
- Lowest Price Guarantee

Get an instant quote today, visit:

www.insure4boats.co.uk/PB36

Or call our UK based Customer Service team on
0800 668 1661 (quoting PB36)

We insure: Sailing Yachts | Narrowboats | Weekenders | RIBs | Speedboats | Jet Skis | Cabin Cruisers | Inland Crafts



CONTACT PBO EDITORIAL

By email: pbo@timeinc.com

Via our website: www.pbo.co.uk

By post: PBO, Time Inc. (UK) Ltd, Westover House,
West Quay Road, Poole, Dorset BH15 1JG

By phone tel: +44 (0)1202 440820

By Fax: +44 (0)1202 440860

Editor
Editor's PA
Deputy Editor
Art Editor
Production Editor
News Editor
Contributing Editor
Technical Illustrator
Charts and maps
Publishing Director
Managing Director

David Pugh
Roz Jones
Ben Meakins
Kevin Slater
Marco Rossi
Laura Hodgetts
Sarah Norbury
Graham Smith
Krystof
Simon Owen
Oswin Grady



Waiting for the tide



with the editor

To receive the editor's monthly email newsletter, sign up on our website: www.pbo.co.uk

ARTICLE SUBMISSIONS

When submitting letters, practical projects or other articles please include hi-res digital images. Please include your name and full postal address. The editor reserves the right to shorten or modify any material submitted. Time Inc. (UK) Ltd and/or its associated companies reserve the right to re-use any submission in any edition, format or medium. We cannot take responsibility for manuscripts or photographs sent in.

SUBSCRIPTIONS

Tel: 0844 848 0848 (low call rate)

Tel: +44(0)330 3330 233 (overseas)

Email: magazinesdirect@quadrantsubs.com

COPY SERVICE buy previous articles

Visit: www.ybw.com/reprints

Email: copyreport@timeinc.com. Tel: 01202 440832

BUY A BACK ISSUE

Back issues cost £6.95 each. Tel: +44 (0)1733 688 964 (24 hrs). www.mags-uk.com/Publisher/TimeInc

DISPLAY ADVERTISING

Brand Manager **Michael Beattie** +44 (0)203 148 4889
Account Manager **Tom Stevens** +44 (0)203 148 4884
Account Manager **Simon Spong** +44 (0)203 148 4894
Account Executive **Chris Wilson** +44 (0)203 148 4891
Account Executive **Jamie Coles** +44 (0) 203 148 4888
Account Executive **Sam Shaw** +44 (0)203 148 4882
Digital Brand Manager **Ben Leek** +44 (0)203 148 4922
Head of Market **Stuart Duncan** +44 (0)203 148 4880
Production **Peter Burton** +44 (0)203 148 2688

CLASSIFIED ADVERTISING

To advertise Tel: +44 (0) 203 148 2001

e-mail tommy.sullivan@timeinc.com

Advertise online at www.ybw.com/buy-and-sell

MARKETING

Marketing Exec **Amy Golby** Tel: +44 (0) 203 148 4287

SYNDICATION

Senior Sales Exec **Cerie McGee** +44 (0)203 148 5476

LEAFLETS & INSERTS – INNOVATOR

Sales Exec **Mona Amarasakera** +44 (0)203 148 3710

NEWSAGENTS – TO STOCK PBO

Contact **Mike Dore** Tel: +44 (0)20 3147 9177

E-mail: mike_dore@marketforce.co.uk



To advertise on www.pbo.co.uk contact Ben Leek,
tel: +44 (0)203 148 4922, ben.leek@timeinc.com



www.twitter.com/p_b_o



www.facebook.com/practicalboatownermag

Practical Boat Owner (incorporating The Yachtsman, Yachtman & Boat, Helmsman, Practical Boating, Yachting & Boating Weekly, Yacht & Boat Owner, Boat and Yachts & Equipment) is published monthly (13 issues per year) by Time Inc. (UK) Ltd, Blue Fin Building, 110 Southwark Street, London, SE1 0SU England. Pre-press services by Rhapsody. Cover printed by Polestar Chantry. Text printed by Polestar Chantry. Bind Polestar Bicester. Published every fourth Thursday. Subscription enquiries and overseas orders: Tel: +44 (0)330 3330 233. E-mail: magazinesdirect@quadrantsubs.com. Credit card hotline (9am to 5pm UK time) Tel: +44 (0)844 848 0848. Cheques payable to Time Inc. (UK) Ltd. Send UK orders and correspondence to: PBO Subscriptions, FREEPOST CY1061, Haywards Heath, West Sussex RH16 3BR (if posted in the UK) and PBO Subscriptions, PO Box 272, Haywards Heath, West Sussex, RH16 3FS, UK (if posted overseas). One year (13 issues) subscription rates: UK £61.20; Europe €117.50; US/CAN/DEU \$132.65; US/CAN/PRN \$132.65; Rest of World: £118.50. Check the subscription page or www.pbo.co.uk for our latest offer. Airfreight and mailing in the USA by our mailing agent Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. US Postmaster: Send address changes to Practical Boat Owner, Air Business Ltd, c/o Worldnet Shipping Inc. Subscription records are maintained at Time Inc. (UK) Ltd, Blue Fin Building, 110 Southwark Street, London, E14. Distributed by: Marketforce (UK) Ltd, 5 Churchill Place, London E14. Condition of sale: this periodical shall not without the written consent of the publishers first, be given, be lent, resold, hired out, or otherwise disposed of by way of trade at more than the recommended selling price shown on the cover (selling price in Euro subject to VAT) and that it shall not be lent, resold or hired out, or otherwise disposed of in a mutilated condition or in any unauthorised cover by way of trade or annexed to or as part of any publication or advertising literary, or pictorial matter whatsoever.

A projectless PBO: but not for long

It's been quite a busy month. In the aftermath of London Boat Show, it's been all hands to the pump to find our Project Boat *Hantu Biru*'s new owner, a mere matter of processing several thousand competition entries filled in from the magazine, online or from the forms handed out at boat shows around the UK. We've had a tremendous response, and I'd like to thank all those readers who have taken such a lively interest in the project, visited us on the boat and made the 46 days the PBO team have spent standing at boat shows both interesting and enjoyable. During the competition, many of you made such convincing cases for winning the boat that we could have given her away many times over: by the end, we were grateful that a random number generator would make the final decision!

But the wait is now over, and it's finally time for *Hantu Biru* to

It's time for *Hantu Biru* to move on to her new home

move on to her new home. And, I have to say, our concerns that the boat might be won by some serial competition enterer just itching to put this 'luxury yacht' on eBay, proved ultimately unfounded. We couldn't have asked for a more suitable winner in Anna Millington, the lucky young lady whom fate chose to be the new owner of what must be the smartest Snapdragon 23 afloat.

You can read her story in full on page 6, but, in short, Anna and her partner Andrew have been enjoying the water for the past couple of years on board a Fletcher 19 powerboat. They recently decided that sailing was more their style, and had decided to sell their existing boat and fund a mid-20ft sailing boat with the proceeds when Anna saw *Hantu Biru* at Southampton and entered the competition on the off-chance that she might win. If you ever needed a definition for serendipity, this is it.

We met Anna and Andrew a few days

after the competition was drawn, and it was a great vindication of the four years' work we have put into the boat to see someone so enthusiastic to make use of her. So enthusiastic, in fact, that Ben Meakins and I will be towing *Hantu Biru* to Southampton this week for her first launch in new hands – at least a month earlier than most boats will manage! We'll be catching up with Anna and Andrew later in the year, but I wish them a fun-filled season, and formally forgive them if they scratch the paint – so long as it's not too much!

Meanwhile, we're temporarily projectless. It's not a situation which can last – your interest in *Hantu Biru* has made that clear and, to be honest, neither Ben nor I are that good at sitting at a desk when there's a chance of getting our hands dirty on some boat work. The only

question, of course, is 'what next?' On that, however, I'll have to remain silent a little

longer, but suffice to say that we're most of the way to negotiating a very different project, but one which we think will be every bit as engaging. I'll say no more for now, but next month I hope to be able to announce *Hantu Biru*'s successor.

In the meantime, in company with most other practical boat owners, we're working hard getting our own boats ready for the season, and setting some time aside to get ahead with some of the more demanding equipment tests and seamanship articles we have planned for 2016.

All this to come, but for now I hope you enjoy this issue. Our annual Marina Price Guide gives you an at-a-glance reference to find the best-value berthing in your area, while elsewhere in the magazine we're tackling keel repairs, top-overhauls for engines, and tools to help tweak your rig. And, my personal favourite, Will Steynor's onboard innovations on page 61.

Fair winds,

David Pugh

PBO is also available on these digital platforms





**PBO Project Boat
winner Anna Millington
with her partner
Andrew Ellison**



And the winner of the PBO Project Boat is...

A knock on the head while surfing convinced 29-year-old Anna Millington that she was dreaming when she was later notified about winning the PBO Project Boat

Aнна Millington, an electronics engineer from Ferndown, Dorset, has won the PBO Project Boat, the Snapdragon 23 *Hantu Biru*. She had been following the boat's restoration since becoming a PBO subscriber a year ago as a birthday present.

The PBO Project Boat free prize draw attracted almost 6,000 entries via magazine entry forms, online at pbo.co.uk and at the Southampton, Scotland and London boat shows. All the entries were added to a database by an independent company, and the winner was picked at random.

Anna said she was 'absolutely made up' to win *Hantu Biru* after entering online, and can't wait to learn to sail with her partner Andrew Ellison. She said: 'For

the last few years we've had a 19ft Fletcher speedboat. We haven't really done much sailing before, but the week before we found out I'd won, we'd decided we were going to sell our Fletcher and get a small cruising yacht: so the fact that I should get an email from PBO later that week to say I'd won *Hantu Biru* was a complete shock, I can't believe the serendipity of it.'

She added: 'I'd been surfing that morning and taken a knock to the head. I was a bit dazed and confused, and when I saw the email I ran in to see Andrew and he didn't believe me at first. It's only just sunk in.'

Anna said she had enjoyed dinghy sailing with her sister when she was younger. She said: 'Just being around this sailing

lark appeals to Andrew and I so much, we really want to learn.' Since winning *Hantu Biru*, Anna and Andrew have kindly been offered a half-price RYA Competent Crew course, by



Anna, Andrew and *Hantu Biru*. 'She's exactly what we were after'

Universal Yachting in Southampton. They've also been kitted out with polo shirts, JB01 deck trainers and jacket tops thanks to Adidas Sailing.

Anna and Andrew plan to berth *Hantu Biru* at Town Quay, Southampton. Anna said: 'Everything is working out amazingly. There probably isn't another boat in the country that's had as much work done on it or so many pages written about it as *Hantu Biru*. I'll be happy if people recognise her, I'm always happy to talk about boats.'

'Super-excited'

She added: '*Hantu Biru* is palatial by comparison to our little speedboat: she's exactly what we were after. Our favourite place to go is Osborne Bay, where we usually travel up the river by stand-up paddleboard to the pub. We're super-excited that *Hantu Biru* has a wind-up keel; we'll be able to take her down Newtown River. I can't believe I've won a boat. I'm so excited and so grateful to everyone who's worked on her. I once won a cake at school, but this is a bit different.'

PBO editor David Pugh said: 'All of us at PBO are delighted that *Hantu Biru* is giving a young couple the chance to learn about and enjoy sailing. She's the perfect boat for pottering around the creeks and anchorages of the Solent, and Anna and Andrew's enthusiasm suggests that she'll be getting plenty of use.

'We couldn't have asked for a better outcome.'

DIY antifouling conference

Representatives from the UK's leading paint manufacturers, along with PBO, attended a meeting at the Southampton Hilton in early February to discuss the results of a comprehensive survey to study the DIY use of antifouling (AF) paints.

Ahead of the possible implementation of EU regulations that could restrict the application and use of antifouling paints to professional applicators, the British Coatings Federation (BCF) commissioned a survey, which was completed by just under 2,500 boat owners.

The survey confirmed that over 90% of those surveyed are well aware of the hazards involved in the application of AF paints, and use the appropriate personal protective equipment. It also highlighted areas where improvements could be made, including provision of training courses, guidance on disposal of waste paint, and minimising the risks of skin contact with AF paint during its application. BCF members and interested parties discussed ways to proceed, with a strategic action plan to defend the continued use of AF paints by the DIY applicator.

Watch this space, and go online at www.pbo.co.uk to find out how to continue safely applying antifouling yourself.

PBO Ask the Experts LIVE! returns to the Beaulieu Boatjumble

Practical Boat Owner magazine will once again be bringing a team of marine industry experts to Beaulieu Boatjumble for a day of free practical talks and demonstrations.

Held on Sunday 24 April between 9am-5pm, within the grounds of Beaulieu Estate in Hampshire, the Boatjumble is the largest event of its kind in the UK and annually attracts thousands of bargain hunters. Following the success of last year's inaugural PBO Ask the Experts LIVE! we will once again be hosting a large marquee close to the show's main gate, where visitors can enjoy free practical demonstrations and talks, plus the chance to quiz the experts with boating questions.

International Paint's chemist Kate Moss will return to Experts LIVE! for a second year, this time to share her expertise on how to prep and apply varnish to boats. Kate said: 'Last year's event was a great success, with hundreds of people coming to get practical help on all aspects of painting their boat.'

'The focus for the demonstration this year is varnishing, and we will be covering various topics – from surface preparation and old varnish removal, to application and repair techniques – as well as maintenance during the season. We look forward to seeing you there!'

Viking Life-Saving Equipment



International Paint's Kate Moss and Roger Bolton's demonstration at PBO Ask the Experts LIVE! at last year's Beaulieu Boatjumble

will be hosting a liferaft inflation demonstration, Paul Singer of British Marine South West will be sharing top tips and revealing the pitfalls of buying and selling boats, and Sika's technical services expert Gareth Ross will demonstrate how to use sealants for bonding and waterproofing on board. Gareth said: 'Last year's event was a huge success for us, and we enjoyed a very positive response from those that attended and a huge amount of interest in our products and how to correctly apply them.'

An expert from Wessex Resins will demonstrate the safe and effective handling of epoxy products in the repair and fit-out of wood and glassfibre on your boat, and David Wells from South Devon College

will show how tasty, inventive dishes can be prepared on just one or two gas burners in limited galley space. Meanwhile, Golden Arrow Marine's Dave Hill will stage a practical demonstration on keeping diesel engines in tip-top shape, RNLI community safety resources and development coordinator Mike Hannam will hold a free lifejacket clinic, and PBO tester Alan Watson will offer his expertise about electronics on board.

■ Visit www.pbo.co.uk/expertsive for updates. Quote PBOMAG16 for 15% off boatjumble tickets. For further information about Beaulieu Boatjumble visit www.beaulieu.co.uk/events/boatjumble.

Storm Imogen batters parts of Britain

A low-pressure system, named Storm Imogen, brought 'phenomenal sea states' off the south-west coast of Britain in early February.

The Met Office issued an amber 'be prepared' national severe weather warning for very strong winds on 8-9 February as Storm Imogen moved across southern England and South Wales. At sea, waves topped 16m (52ft 6in) and a wave of 19.1m (63ft) was recorded off St Ives, the Met Office said. Fastnet lighthouse, off the south-west of County Cork, recorded sustained winds of up to 121mph, and Met Office forecaster Emma Sillitoe said winds had hit 96mph at the Needles off the Isle of Wight.



One manifestation of the dramatic effects of Storm Imogen: a huge wave breaks over the pier behind Porthcawl RNLI

Boat Register goes public

The Old Gaffers Association is opening up its online Boat Register to the public.

The OGA has collected details on members' boats for nearly 50 years, with nearly 4,000 boats in the archives. At present over 1,000 are visible, but only to logged-in members on the OGA website. With the exception of ownership details, these records will be available to the public after some modifications, and when members have been given the option to request that their boat is not made public. Extensive paper archives will be added to the online database.

■ www.oga.org.uk

‘Nine’ lifeboat rescues is ‘grossly exaggerated’ says *Nora* skipper

The skipper of the American yacht *Nora*, who faced national condemnation for multiple encounters with British rescue services, says reports of ‘nine rescues in seven months’ is ‘grossly exaggerated’.

Steve Shapiro, aged 71, says only three were emergency call-outs, and the rest were just friendly assistances by lifeboat volunteers passing by. Steve is on a voyage from Scandinavia to North America in the 12m (40ft) Colin Archer gaff cutter with crew Bob Weise, a retired lieutenant colonel army pilot – also in his 70s. They have prompted lifeboat assistances in Norway, Scotland, Ireland and England since setting sail last July.

Nora’s latest assistance, on 26 January, occurred when the boat tipped over in low water at Hayle Harbour’s East Quay and an unattended candle reignited and set a pile of clothing alight. The blaze, which was extinguished by the fire service, caused ‘cosmetic damage’ to the boat. A week earlier, *Nora* had been towed into Hayle by St Ives RNLI lifeboat when ‘the power suddenly stopped’ while leaving St Ives.

Steve, who has been sailing since he was nine, said: ‘Only three of the rescues were really distress calls, and those were at the beginning of the journey, then we had things under control. Even if the boat was broken we could’ve fixed it, it’s very seaworthy.’

Steve added: ‘I don’t fault my seamanship, and there’s no way anyone else could. We were advised



Fire services attend to a clothing blaze on *Nora* in Hayle Harbour

to keep in touch with the coastguard and to call for assistance. The rescuers are there for anybody without prejudice. They weren’t dangerous call-outs except for one in the North Sea: all the others didn’t demand anything more than routine training. I don’t make light of it, we’re very grateful for them being there, and I’m very appreciative.’

The rescues occurred off Norway when the boat began to leak in strong seas after it ran over fishing lines and the propeller shaft got caught, creating a hole; when approaching Wick, northern Scotland as they still had a ‘pretty bad leak’; and in the middle of the Moray Firth when the engine transmission failed. Lifeboat assistances took place when they ran aground going into Helmsdale, Scotland and at

Red Bay, Northern Ireland, although in both cases they had to wait for the rising tide to float free.

‘A bad rap’

At Wicklow, meanwhile, they ran ‘aground for a couple of seconds’ and a lifeboat assisted them alongside: and upon leaving Kilmore Quay en route for Land’s End, *Nora* struck a sandbar and a nearby lifeboat pulled her free, then ‘happily escorted’ them out of the harbour. In St Ives, Cornwall, lifeboat volunteers assisted by tying *Nora* to a RNLI buoy. When leaving for Hayle, the yacht lost propulsion and was taken under tow. Steve said: ‘Some articles have counted those as rescues. I think that’s a bad rap.’

In total, Steve says he and Bob had spent five months of their seven-month voyage enjoying ‘very pleasant sailing’. He admitted a lack of familiarity from buying a new boat didn’t help, and said *Nora* was ‘more worn than advertised. We’ve brought it up to date and made repairs.’

At the time of going to press, Steve and Bob were ‘waiting for clear weather’ to leave Hayle and continue their voyage to Maine, USA. Steve said: ‘I’m not trying to set records or have an adventure, I’m just sailing my boat home.’

‘Should be detained’

Peter Haddock, harbour master in Hayle where *Nora* is currently situated, believes the boat should be detained by the UK Coastguard. He said: ‘I’d be very surprised if they made it across the Atlantic, it’s been a disaster ever since they left Scandinavia. They’re oblivious to danger and to the problems they’ve created: it’s really frightening.’

A spokeswoman for the Maritime and Coastguard Agency said: ‘We have not been made aware of any grounds that would lead to detaining this vessel.’

Ocean Cruising Club award winners announced

The Ocean Cruising Club (OCC) has named the 2015 winners of its awards, recognising outstanding achievements of blue water sailors.

The top award, the Barton Cup, went to Michael Johnson, s/v *Gitana*, for his successful two-year transit of the Northwest Passage. Sailing from Chesapeake Bay, Virginia to Nome, Alaska, the passage took place in a particularly challenging period due to icy conditions.



Michael Johnson, winner of the OCC’s top award, the Barton Cup

The OCC Award of Merit was shared among multiple members and the OCC Port Officer Representative, who contributed exceptional efforts to assist the people of Vanuatu after the devastation caused by Hurricane Pam. The OCC Award went to Tom and Vicky Jackson, s/v *Sunstone*, for their many cruising and racing achievements, amounting to 34 years and almost 200,000NM aboard their 12m (40ft), Sparkman & Stephens-designed, 50-year-old sloop.

Australian doctor John Vallentine, s/v *Tainui*, scooped the Vasey Vase for interesting and challenging voyages over a 10-year period, during which he devoted half of each year providing medical services to remote Aboriginal outstations in the western Australian deserts, and the other half sailing mostly to cold climates and isolated locations.

The OCC Seamanship Award recognized Bob and Mona Jankowski, s/v *Continuum*, for the heroic rescue of Randy and Dawn Ortiz from s/v *Nirvana*.

Booklet Bundle!

Save over
33%

You pay just...

£13.99 RRP £22.71

Tel: 01202 440832 email: copyreport@timeinc.com



Two die in yacht capsizes off the South African coast



Murielle De Jager

The yacht *Tara* was found broken up on the Western Cape shoreline

A Scottish man and an Irish woman died when their yacht capsized off the West Coast, Western Cape, South Africa.

On 1 February, National Sea Rescue Institute (NSRI) crews were activated by the Transnet National Ports Authority (TNPA)

following reports of a yacht capsized between Bokpunt and Gansekraal. The yacht *Tara* was found broken up amongst rocks on the shoreline. It is unknown what caused the yacht to run aground, and it could not be confirmed if it had capsized before running aground. The South

African Maritime Safety Authority (SAMSA) will investigate.

There were three crew members on board, reportedly sailing from Langebaan to Cape Town. A 66-year-old Irishman, a resident in the Western Cape, had managed to get to shore and raised the alarm. He was uninjured. The bodies of a 61-year-old Scotsman and a 49-year-old Irishwoman, both residents in the Western Cape, were recovered from the scene. An inquest docket has been opened by police.

A spokesman for Sea Rescue South Africa said: 'Family are being assisted by foreign consulates, and sincerest condolences are expressed to family and friends by all emergency services involved in the operation.'

Fairline's future secured

The future of British-based boatbuilders Fairline Boats has been secured, thanks to a deal that sees the firm's assets bought out of administration for an undisclosed sum.

The new company, Fairline Yachts, is funded by two UK-based Russian investors, who are both experienced in managing and developing marine businesses and in the production of hi-tech products, IT and media services.

Russell Currie has been appointed as managing director. A Fairline dealer since 1998, Russell is CEO of Fairline North Mallorca, where he has achieved more than £90million of sales.

The new company will operate from its manufacturing facilities in Oundle, Northamptonshire, saving 100 jobs from the 450 that were housed at three sites before its administration.

World Sailing Show begins



The first episode of the **World Sailing Show** has been broadcast.

The new show will look at the past, present and future of sailing across the globe, from non-stop round-the-world racers to Olympic campaigners, and from seasoned professionals to grass-roots weekend warriors, with the latest action afloat. The first show explores how the world's biggest trimaran, *Spindrift 2*, took three world records but narrowly missed out on the record the crew really wanted.

It also visits the Sailing World Cup in Melbourne to report on

five sibling teams and catch up with the latest in the Paralympic classes, before heading to Malaysia to find out how Olympic aspirations are a family affair, while also taking a glimpse into the future at the Youth World Championships. The new head of World Sailing, Andy Hunt, also reveals what makes him tick.

■ www.sailing.org/tv

DIARY DATES

- **Essex Boat Jumble**, 28 February, Ardleigh Showground, Ardleigh, near Colchester, CO7 7QR. Entry £4.
 - **RYA Suzuki Dinghy Show**, 5-6 March, Alexandra Palace, London, www.rya.org.uk
 - **Pre-Season Boat Show at Swanwick Marina**, 5-6 March, 10am-4pm, www.premiermarinas.com
 - **Kent Boat Jumble**, 6 March, The Hop Farm, Paddock Wood, Tonbridge, Kent. TN12 6PY. Entry £4.
 - **Peter Leonard Marine boat jumble and boat clearance sale**, 20 March from 9am, Newhaven, www.plmarine.com
 - **Fish & Ships**, 9-10 April, Osprey Quay, Portland, with new and used boats for sale, watersports demonstrations, sailing opportunities and food stalls and musical entertainment, in aid of local charities.
 - **Irish Boat Jumble**, 10 April 2016, Carrickfergus Sailing Club, Rodger's Quay, Carrickfergus, Co. Antrim, www.irishboatjumble.org
 - **West of Scotland Boat Jumble**, 1 May, opens 10am, Scottish Maritime Museum, The Harbourside, Irvine. Admission £4. Accompanied children and car parking free. www.wsbj.co.uk
 - **Beaulieu Boatjumble**, 24 April, 9am-5pm, www.beaulieu.co.uk/events/boatjumble
 - **London On-Water Yacht & Boat Show**, 4-7 May, Old Billingsgate and St Katharine Docks, London. New and used boats on display. www.londononwater.com
 - **Push The Boat Out**, 14-22 May, UK-wide event with sailing clubs and venues offering discounted and free taster sessions, email ptbo@rya.org.uk
 - **Poole Harbour Boat Show**, 20-22 May, www.pooleharbourboatshow.co.uk
- Send your diary dates to pbo@timeinc.com, see more online at www.pbo.co.uk/events

PBO www.pbo.co.uk

Visit the revamped PBO website to find more free practical content online than ever before. Plus breaking news, gear tests, seamanship advice, reader forums and your questions answered. www.pbo.co.uk





t: 023 8045 4507
e: SALES@VETUS.CO.UK | WWW.VETUS.COM

The

SYSTEMS SOLUTION

for MANOEUVRING

CREATORS OF
BOAT SYSTEMS

- Quality engineering
- Innovative design
- Competitive pricing
- Guaranteed compatibility
- Unrivalled warranty





ENGINES | STERN GEAR | FUEL | INSTRUMENTS | FRESH WATER | WASTE WATER | MANOEUVRING | ELECTRICAL | STEERING | HATCHES | VENTILATION

News from your cruising area

Send us your local news stories. Email PBO news editor Laura Hodgetts at news@pbo.co.uk, tel: 01202 440825, or write to the address on page 5

SOUTH

DEVASTATING BLAZE

A large accidental fire at Medina Village industrial estate, Cowes destroyed 30 boats – including two classic yachts whose restorations were nearing completion. The explosive blaze started in a car repair workshop and swept through industrial and storage units on 25 January.

Among the yachts lost were the Dunkirk Little Ship *Vere*, 15 Etchell keelboats, seven XOD One Designs, five Dragon keelboats, the Mylne yacht *Fedoa*, which was being restored by Moreton Marine, and the Sibbick yacht *Witch* that was being restored by Martin Nott on the same premises. Site owner, the Harrison Trust, said Medina Village has reopened, and demolition work is under way to make the site safe.



Rick Tomlinson

This fire at an industrial estate in Cowes destroyed 30 boats

@BenBoard3569

TALENT PROGRAMME

The British America's Cup challenger and its partner Land Rover have launched a talent programme to find and support young British sailors, and create a pathway into the America's Cup. The first intake into the academy will see a squad of 12 sailors competing in the Extreme Sailing Series, which takes high-speed catamaran sailing close to city

centres all over the world and uses a foiling multihull, the GC32.

Chosen from an ongoing selection policy, the academy sailors will have regatta costs paid for, access to expertise and facilities at Land Rover BAR's Portsmouth headquarters, mentoring and support. Applicants need to be aged between 19 and 24 on 31 December 2017.

www.landroverbar.com/academy

CHANNEL ISLANDS

MARINA PLANS AXED

A multi-million-pound proposal to redevelop Alderney's harbour area and create a marina has been dropped. Alderney Developments Ltd, the company behind the scheme at Maggie's Bay, has cited uncertainty over the future of the breakwater as the reason.

The fate of the breakwater remains in doubt, as Guernsey States – responsible for its maintenance – has yet to decide whether to continue its current maintenance programme or shorten the existing breakwater and build a new limb to ensure that a sheltered harbour remains. Guernsey States says that the breakwater, built on a rubble mound, has a finite life as it is.

SOUTH-WEST

TRANSAT PREPARATIONS

Preparations are in full swing in Plymouth to host the start of the 14th edition of the world's oldest solo transatlantic race – the Transat. Plymouth was the first city to play host to the race, and the fleet will race 3,000 miles to Brooklyn in New York, where the Transat first finished 56 years ago. From 24 April, a week of events will include a new Ocean City Blues Festival, an air show and a fireworks display, before the 40-strong fleet set sail on 2 May.

This year's race has attracted Vendée Globe competitors Sébastien Josse and Armel Le Cléac'h in the IMOCA60, Transat Jacques Vabre winner Erwan Le Roux and Route du Rhum winner Thomas Coville on the flying multihulls and seasoned offshore competitors Miranda Merron and Thibaut Vauchel in the Class40. www.visitplymouth.co.uk

DRIFTING CARGO SHIP

A Dutch warship joined RNLI lifeboat volunteers to rescue a stricken 300ft cargo vessel that was drifting close to the North Devon coast amid rough seas and Force 8 gales. The stricken cargo ship, *Verity*, was carrying 3,000 tonnes of scrap metal. The ship's engine failed four miles off



Cargo ship *Verity* under tow from Padstow Lifeboat

RNLI Alan Hoskin

Hartland Point. With support from the Appledore RNLI crew, Padstow lifeboat established a tow to the ship, which later parted, but the crew managed to reattach it. The tow was maintained until the Dutch frigate HNLMS *De Ruyter* arrived on scene. The Dutch warship then began the slow tow towards Lundy Island to await a tugboat. *Verity* was later towed to Swansea for repairs.

WALES

TIDAL LAGOON SWANSEA BAY SCHEME DELAY

Plans to generate energy from Swansea Bay lagoon face further delays as the UK energy minister has announced a six-month review of the sector.

Tidal Lagoon Swansea Bay has welcomed the launch of a government review into the potential for tidal lagoon energy across the UK, but expressed concern about delays to the scheme. Mark Shorrocks, chief executive, said: 'We have built a team, secured planning permission, secured equity sponsors, prepared a delivery team and a supply chain. We have received overwhelming support for this project locally, nationally and internationally. If tidal lagoon power at scale is to be a real option for the longer term, we need to start work now, otherwise the opportunity will be lost and the review will be all for nothing.'

IRELAND

ROS AN MHÍL IMPROVEMENTS

Major improvements are being carried out to Ros an Mhíl Harbour in Connemara. The €3.5million project includes the creation of a new small craft harbour, the design and construction of a new slipway, and the design, evaluation, consultation and preparation works for development of the harbour's existing quay. Funding is being provided by the Irish Local Authority Fund for Harbours and Piers.

NI MCZ CONSULTATION

A consultation is under way for four new Marine Conservation Zones in Northern Irish waters. The four proposed sites (pMCZs) are Rathlin, Waterfoot, Outer Belfast and Carlingford Lough. Potential management measures to protect the marine habitats in these areas include limits on anchoring and mooring, and at Rathlin a speed restriction zone and proposals to limit expansion of the existing marina facilities.

The Royal Yachting Association (RYA) and the Royal Yachting Association Northern Ireland (RYANI) have been working closely with the Department of the Environment Northern Ireland (DOENI) to ensure that the views of recreational boaters are considered in the plans. The RYA and RYANI will now consider whether the proposed management measures are proportionate, enforceable and effective.

The consultation closes on 11 March 2016. Visit www.doeni.gov.uk/consultations/marine-conservation-zones-consultation.

NORTH-WEST

WHITEHAVEN MARINA SEA LOCK CLOSURE

Whitehaven Marina in Cumbria has confirmed that its two-week annual lock closure takes place between Monday 22 February and Monday 7 March 2016. The sea lock at Whitehaven Marina, and the 265-year-old breakwaters, form an integral part of the marina and town's sea defences. Mark Bowden, operations director for Whitehaven Marina, said: 'We will be spending in excess of £35,000 to ensure all aspects of the sea lock are serviced and checked. Having seen the increase in frequency of powerful storms and tidal surges in recent years, this work will ensure that the marina and town will be kept safe.'



Next month

SCOTLAND

VILLAGE FACILITIES BOOST

Loch Harport, on the west side of the Isle of Skye, has provided a safe haven for seafarers for centuries, but until recently there have been precious few facilities for visiting boats. Thanks to the efforts of a local community company, the village of Carlost now offers berthing alongside the renovated pier, visitor moorings and, by summer 2016, overnight pontoon berths. A new building housing toilets and showers will also be completed this summer.

For seafarers arriving by road, a new slipway allows launching and recovery of boats at all but low water Springs, and ample parking for towing vehicles and trailers. Carlost boasts a shop, post office, waterfront

inn and a local seafood takeaway. It is also home to the Talisker distillery, which welcomes visitors throughout the year.

Contact: tieup@carlost-pier.org.uk or visit www.facebook.com/CarlostPierLtd.

NORTH-EAST

WORLD'S LARGEST OFFSHORE WIND FARM

DONG Energy has confirmed it will build the giant Hornsea Project One offshore wind farm off the Yorkshire coast after taking a final investment decision. With a capacity of 1.2 gigawatts (GW), Hornsea Project One is capable of powering more than a million UK homes and will be the world's largest offshore wind farm. It

will be located 120km off the Yorkshire coast, spanning an area of approximately 407km², with up to 240 turbines, each 190m tall.

Siemens, which has a factory in Hull, has been named the preferred supplier for the seven megawatt (MW) turbines. A £25million contract has also been awarded to UK infrastructure company Balfour Beatty for the construction of the onshore substation. Hornsea Project One is expected to be fully commissioned in 2020.

SOUTH-EAST

FUTURE NAVIGATION

The General Lighthouse Authorities (GLAs) of the UK and Ireland are holding an event to explore the mix of technologies for future maritime navigation in 2030 and beyond, and identify potential complements to Global Navigation Satellite Systems (GNSS). The event, at Trinity House, London, will run from 10am-5pm on 2 March and will be held jointly with the Knowledge Transfer Network and the Royal Institute of Navigation.

Presenters will include mariners, ship operators, navigation specialists and technology providers, and delegates will have the opportunity to network and participate in a Q&A session. The event is free, but delegates must register in advance at www.eventbrite.co.uk/e/innovation-in-maritime-navigation-tickets-20751532392.

INLAND

HUNGERFORD MARINA PLANS APPROVED

Plans for a 120-berth marina in Hungerford have been approved. The marina will cover an 11-acre site with anti-slip, recycled plastic jetties with water, electricity and Wi-Fi to each berth. Shoreside facilities will include an amenities building with a reception area, toilets, showers and laundry facilities, a café restaurant and three residential flats.

EAST

WHALE DEATHS

The UK Coastguard responded when six sperm whales were washed up and died along the East Coast of England within a fortnight. A bull sperm whale and a female sperm whale beached themselves on Hunstanton Beach, Norfolk on 22 January and 4 February respectively, while three whales were found dead on a beach near Skegness, Lincolnshire and another whale was washed up near Wainfleet, Lincolnshire on 25 January. They are all believed to be from the same pod. A seventh whale was reported in difficulty in shallow water off the coast of Mundesley, Norfolk on 9 February. The search was stood down when it was later spotted moving back out to deeper water with the tide.

UNCHARTED WRECK

The uncharted wreck of a First World War German submarine has been officially identified three years after being discovered off the coast of Norfolk and Suffolk. Survey teams from ScottishPower Renewables (SPR) and Vattenfall spotted the wreck in September 2012 while seabed scanning for wind farm development projects.

On 21 January, the wreck was officially identified as submarine U-31, which left for patrol on 13 January 1915, never to return. The wreck is roughly 90km offshore, but sits on the seabed at a depth of only 30m. As an official military maritime grave, U-31 will remain in its final resting place: plans for any wind farm development will be progressed ensuring no disturbance to the area.



Two dead whales washed up on the beach near Skegness

PRACTICAL

A high-speed tender

■ The fastest flubber in the west?

Plus

- Understanding metal fatigue
- Gas safety on board
- Fitting a folding prop
- Car engine as boat spare, part two – renovation and reassembly

TESTED

Cordless drills

■ An essential tool for any boat owner – but which to choose?

Pulse compression radar

■ Does it live up to the claims of sharp imagery and easy Wi-Fi connectivity?

BOATS

Allures 45, Exploration 45

■ Two very different, French-built, aluminium-hulled cruising yachts

31-33ft cruisers

■ Some groundbreaking early GRP designs

SEAMANSHIP

Modern navigation

■ Get the best from digital and paper

The Bermudan rig

■ Everything you need to know

CRUISING

The Hebridean triangle

■ A bracing week-long charter sail in the Hebrides

Torquay

■ What to see and do if you're sailing into the 'English Riviera'

**MAY ISSUE ON SALE
THURSDAY, MARCH 24**

Contents subject to change



Bargains of the month...

More great bargains in the Chandlery section starting on page 55

WEBBING SOFT SHACKLES

An ideal alternative to traditional stainless steel shackles where the deck fitting or toerail is an awkward shape or size. 25mm polyester 2,000kg safety line webbing. Twist in loop at one end creates natural 'cow hitch' finish. Available in blue, black, red or yellow.

■ Jimmy Green Marine
Tel: 01297 20744
www.jimmygreen.co.uk



RRP £8.00
ONLINE PRICE £5.60 EACH

JABSCO MARINE TOILET

Compact model with Twist 'n' Lock function – an action handle which seals down the toilet seat and protects against syphonic flooding and waste backflow.

■ Gael Force
Tel: 01463 229422
www.gaelforcegroup.com



RRP £163.99
OFFER PRICE £99.99

HEMPEL TIGER XTRA 2.5LT ANTIFOULING PAINT

Self-polishing, erodible. Can be applied in one coat, suitable for all substrates except aluminium. Colours: Grey, Dark Blue, Souvenirs Blue, True Blue, Black, Red, White.

■ Force 4
Tel: 0845 130 0710
www.force4.co.uk



SRP: £99.95, OFFER PRICE
£59.95 – SAVE 40%

Readers share their thoughts and opinions

HOW DRILLING A HOLE FIXED A LEAK IN A CONTESSA 32

Curing troublesome leaks – you know the drill

■ Re 'Tracing those tricky leaks' (PBO February), Ben Meakins invited comment on techniques for fixing leaks – which prompted me to mention the time I fixed a leak by drilling another hole in my Contessa 32.

I was lumping my way round the Lizard, single-handed, having left the Helford with a south-westerly Force 4, and had been hard on the wind on starboard for a couple of hours. Once through the rougher stuff immediately off the headland (and well clear) I'd tacked, eased sheets and set her on course for Newlyn. I had just gone down below to mark a position on the chart, just for form's sake: I knew very well where I was.

At this point, I found myself

paddling: the saloon was ankle-deep with water. Now, I quite like the sea, but I regard it as fundamental to our continued relationship that each of us should stay in our proper places – the sea outside the boat and me in it. So, with a seamanlike expression of fright, I scampered back into the cockpit, grabbed the bilge pump and started pumping away like a thing demented, composing a Mayday signal while doing so.

From force of habit I counted the strokes and, once I'd got to 100, put my head back down the companionway in hopes of seeing some progress. Fortunately, progress was indeed apparent: I was clearly winning over the leak.

I returned to the pump and, as panic subsided, started giving the matter some thought. I hadn't hit

anything, at least not very much or very recently, so a complete new hole in the hull seemed unlikely. After another 100 or so strokes, matters improved to 'soggy' rather than 'awash', so I sampled the remaining puddle: salt. It was definitely water ingress rather than a tank problem.

I then checked the seacocks. Most of them were off, my normal seagoing order. The two on the cockpit drains were open, again as they should be, and there was no sign of any leakage. However, I then noticed that the lid on the anchor well was somewhat askew. It never had been watertight, but it now showed a large gap. I'd certainly been taking seas over the bow, so water must have been filling the anchor well. I had two navel pipes from the well down

into the forepeak, one for each of the two anchors: all of this was to stow the cables below while I could use whichever anchor I wanted.

This indeed turned out to be the source of the trouble. I'd failed to stuff the pipes with rags, and I certainly should have done, but a more fundamental problem also became apparent: there was only one drain from the anchor well, on starboard. As I'd been hard on starboard tack this had been up in the air, and the anchor well must have been full most of the time – draining merrily down the navel pipes. There is now a nice new hole in the boat: a port-side drain to the anchor well.

Chris Mason, by email

Plymouth heralded

■ I read your piece on Plymouth (PBO March) with interest, but noted that there was little information given about the western entrance to the River Tamar past Drake's Island. This passage is used only by shallow-draught boats, both pleasure and commercial, and is locally known as 'The Bridge'. It is marked by three pylons and one yellow conical buoy in the place of the No2 pylon, which was damaged by the marines!

No attempt should be made to enter this passage other than through the bridge, as there are underwater obstructions left over from the Second World War on either side of the bridge. This passage gives easy access to the marinas to the west of Plymouth and the dockyard, but be aware that the whole area is an operational port for commercial and military movements.

Len Baddeley
Cargreen Yacht Club



Greg Goulding replies: *There is indeed a western route past Drake's Island. While local sailors and fishermen are familiar with the depths and routes, as you say it's littered with obstructions, is too shallow for many boats at*

most states of tide and the markers are unclear at best.

While we mentioned this route to the west, we really don't want to encourage visiting skippers to try it, and with a draught of 7ft 6 on our boat, we decided that taking the long route would be preferable. But with such a lot to look at, it's no hardship.

Plane sailing?

■ I have just enjoyed my monthly dose of PBO, and would like to add an alternative twist to the piece by Andrew Simpson ('In search of fresh horizons') in the March issue.

The question of the distance to your boat is an important one for the personal reasons mentioned, but I cannot think of jumping on an aeroplane without worrying about the consequences.

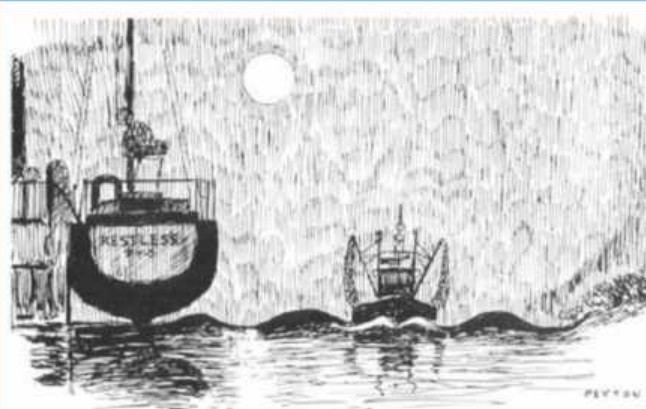
We have seen the terrible effects of climate change, from typhoon Haiyan killing over 6,000 in the Philippines in 2013 to cyclone Pam in the Vannatu islands in March 2015. Here in the UK, this winter's storms have been devastating. That this is man-made climate change has long been

beyond reasonable doubt.

If the fate of others does not stir us, then we may think of the consequences for our hobby of sailing: from established issues like a shortening season in Scotland to the more recent problems of sargassum in the Caribbean, climate change is affecting us all. As relatively wealthy people, most of us are significant contributors to climate change; and the worst thing of all that we can do is to fly.

Richard Proud
By email

PEYTON'S PICK FROM THE PAST



'Relax, relax, there'll be nothing coming up the river so late on the tide'

Taken from Practical Boat Owner August 1988

Fastnet rescues?

■ Being a long-time supporter of the RNLI, I read with interest the article detailing the magnificent work and rescues performed by Matt Lethbridge and his trusty Watson lifeboat *Guy and Clare Hunter* ('A blaze of glory', PBO February). To my dismay there was no mention of the role played by Matt and his crew in the dramatic 1979 Fastnet Race rescues. An entire article could have been filled with the rescues executed in that storm alone. Perhaps we can look forward to such a tribute in a future issue.

David Hill, Isle of Man, Former SHS Peel Lifeboat



A blaze of glory

Mike Taylor catches up with the famous lifeboat *Guy and Clare Hunter*, now in private hands, which continues to be lovingly maintained in her original condition

The Watson class lifeboat, designed by the RNLI, is a small, sturdy, and reliable vessel. It was built in 1979 and has since been used in many rescue operations. The lifeboat is now in private hands and is being lovingly maintained in its original condition. The lifeboat is a testament to the skill and craftsmanship of the RNLI's designers and builders. It is a true piece of maritime history and a valuable asset to the RNLI's fleet.

Keeping the birds outside the cage

■ Re Ivor Durrant's Heavenly Twins restoration (PBO December 2015), I too am refurbishing a catamaran – a Summer Twins 25. I purchased what was virtually an empty shell, and it required a complete rebuild.



A stainless steel cage around the tricolour deters feathered friends

Amongst many jobs that needed doing was providing a new outfit for the mast. Standing and running rigging were simple, but the masthead was a challenge. I wanted to put an Echomax at the top plus navigation lights, a radio aerial and a wind speed/direction transducer.

The main problem was finding the most suitable arrangement for the Echomax and the tricolour, as they seemed to obstruct each other regardless of whatever layout I came up with. I was at the point of

accepting that the Echomax would have to go elsewhere (ideally on the A-frame at the stern) when I saw a news item advising that Echomax were now mounting the tricolour on top of the Echomax aerial. I contacted Echomax immediately, and they were very helpful. As a result, I sent off my tricolour to them: they fitted it to an aerial and returned it within a few days. I am very pleased with the result, and also with Echomax's first-class service. I have since built a small stainless steel cage and fitted it around the tricolour so that our feathered friends are not provided with a nice smooth perch.

R Smith, Fleet, Hants

Taken to task

■ Martin Bence-Wilkins' letter in PBO December about careless workmanship struck a chord with us. We too have employed so-called 'professionals' to work on our boat and have been let down several times. Last April we had radar fitted, and the engineer failed to place grommets where the cable enters and exits the mast. We have asked him many times to return and fit them, but to no avail. Sadly, we paid in full before spotting the problem.

In addition, we purchased an engine repower at Southampton Boat Show last September: work began in early November and was scheduled to take two to three days (replacing one Volvo engine and saildrive with an upgrade). However, the job still hasn't been completed. Other issues include leaving the electrics in an unsafe condition (all circuits were live with the two battery keys removed); the engine oil was overfilled by 50mm above the full mark and incorrect oil was placed in the saildrive, causing the clutch to slip – despite a red label next to the filler hole stating 15/40 oil only.

Currently, the exhaust hose also moves violently, causing resonance, and the company claim this is not part of the contract. Needless to say, we have escalated the matter.

We really enjoy PBO and find the articles informative and useful: keep up the good work.

Sue and David Long, Kent

SEADOG OF THE MONTH



■ This is Wilson, our miniature schnauzer, enjoying a day out on our boat on the River Calder.

Jeff Tune



Seadogs galore!

Visit our seadog gallery at www.pbo.co.uk/seadogs or scan this QR code with your smartphone.

Send us your seadog photos for our web gallery and your pet may be lucky enough to become Seadog of the Month and win you £30



Yesterday's flares

■ Readers may envy the simplicity of disposing of out-of-date flares at a well-known marina in the south of France. You just put them in the cardboard box provided, and they disappear when the box is full. Simple!

**Les Sherry
Winchester**

PBO PUZZLE 200

Q Match the cardinal symbols, colours and light characteristics to the compass points. Colours are listed top down; B denotes black and Y denotes yellow. For example, YB has a yellow top.

North	A	a: BYB	1.
East	B	b: BY	2.
South	C	c: YB	3.
West	D	d: YBY	4.

■ Find the solution at the bottom of page 110

The Kiwiprop Feathering Propeller

faster sailing • powerful motoring • outstanding reverse
stainless steel boss • adjustable pitch • zero blade corrosion

K3 – 3-blade Kiwiprop • 14 to 56 hp engines • All sizes £845 + VAT
The new K4 – 4-blade Kiwiprop • Up to 100hp engines • All sizes £1495 + VAT

VECTA MARINE • Tel: +44 (0)1672 564456 • www.vectamarine.com • sales@vectamarine.com



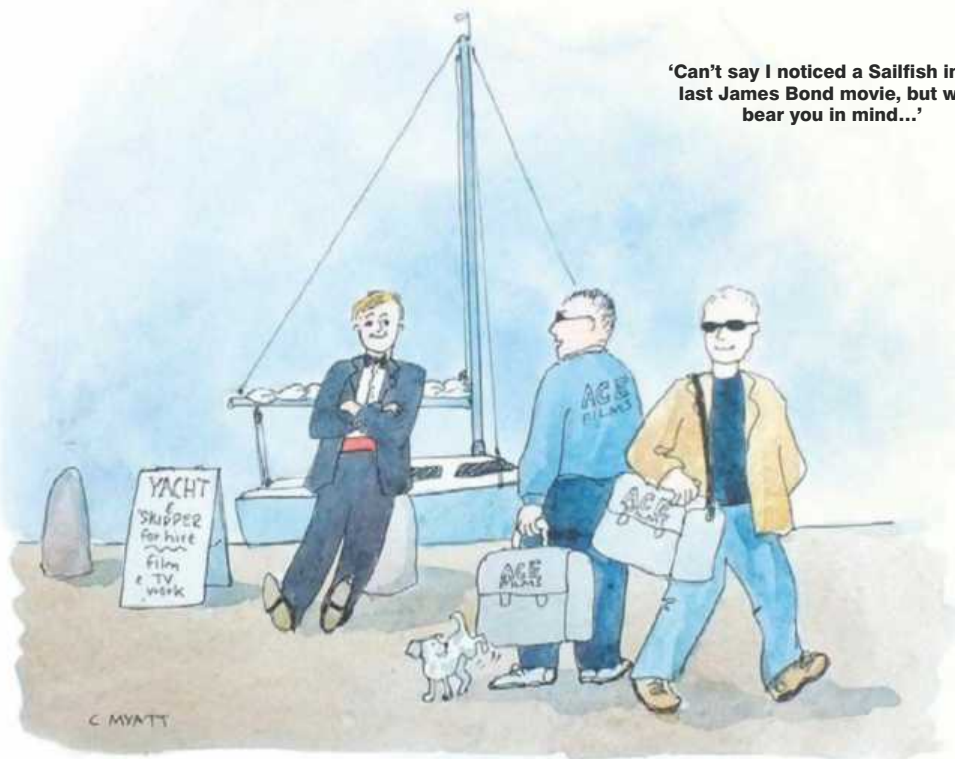


Dave Selby

Mad about the boat

Dave Selby is the proud owner of a 5.48m (18ft) Sailfish, which he keeps on a swinging mooring on the picturesque Blackwater estuary in Essex

'Can't say I noticed a Sailfish in the last James Bond movie, but we'll bear you in mind...'



The Firth dimension

When the movie circus rolls into town, Darcy-fanciers vainly search for Colin Firth – although Dave and Bart are the *real* stars-in-waiting

Maldon has become Tinseltown, the go-to destination for nautical big-screen dramas. In fact, if we had a hill in Essex, we'd probably put up a 'Maldonwood' sign. The latest movie epic to be filmed here is the tragic story of Donald Crowhurst's ill-fated effort to win the Golden Globe trophy for the first sailor to sail non-stop single-handed around the world, directed by James Marsh who made *The Theory Of Everything*. But celebrity hasn't gone to our heads; it's gone to our lips! And that really is pretty weird.

The star of the movie is the historic Downs Road Boatyard, which carried out the first refit on Noah's Ark, and where owner Jim Dines and his crew have just created a fully-functioning full-size

replica of Crowhurst's trimaran, *Teignmouth Electron*, which by all accounts is far better built and more seaworthy than the original. For the movie the boatyard was also transformed into the 1960s, which required considerable modernisation. Apparently even some of the Grade 2-listed cobwebs had to go as they were considered a bit too Disney, and not at all authentic.

Now, I'm not starstruck, but my dog is. And every day the film crew were here, Bart forced me to dress up in my old man's 1960s clobber and parade up and down Downs Road, on the off-chance he might get a gig as an extra. I have to say Bart let himself down yet again, not least because he's the most untrained, most high-pitched and vocal Jack Russell in the world. If they were making a silent movie featuring a dog in a straitjacket he might have

stood a chance, but as it was they passed on the opportunity and asked if I could walk Bart elsewhere, Kent for example, as he was blowing fuses on the sound equipment. Next, Bart made me putt-putt by in my pork-pie helmet and dad's old anorak on my 1960s moped with Bart in the basket on the front. This time they suggested Norfolk. I went to the Queen's Head instead, and that's where I came across the oddest spectacle I'd ever seen.

The bar was heaving with a rare sub-species known as women. In fact, I never knew Maldon had so many of them. What's more, the few I recognised had antifouled their lips with scarlet boot-topping – I think the correct nautical term is lipstick. They also had something wrong with their necks, probably caused by the precarious high-heeled splatters which

gave them the posture of meerkats as they craned to look over my shoulders out of the steamed-up windows.

When I asked one what was going on, she mentioned there was a rumour that Colin Firth might be popping into the Queen's Head. Now, I don't know who Colin Firth is as he doesn't own a Sailfish 18, but from what I gather he's an actor who made his name in a TV series about a frilly wet white shirt. Further research revealed that his character's name was Darcy, so in the spirit of willingness I started asking the men if they were Colin Firth.

This was no easy task, for as in all pukka historic and honest waterfront towns, most men in Maldon wear grey beards, partly to preserve their modesty, as well as a host of other practical, personal, financial and legal reasons. Beards strain lumps out of beer, while also concealing identity from husbands, the authorities and the King's Revenue men, all of whom spend most of their time hunting down a bloke with a beard as a result of tip-offs from helpful citizens.

Needless to say, my first foray for Firth drew a blank. Next I tried asking if anyone was Darcy, but in the hubbub of the pub it seems the 'D' wasn't always heard, which involved me being invited outside by some and having to buy others several pints to calm the situation.

Turns out Darcy Firth never made an appearance, but the Queen's Head did very well that night. But if some elements of Crowhurst's sad story remain a mystery, there was another one that remains unsolved. Why had men who normally wear fish-splattered smocks for a night on the town chosen to wear white shirts on a day when none of them were in court? Some people really are desperate!

PBO LISTEN ONLINE

Hear Dave Selby's podcasts on the PBO website www.pbo.co.uk



Protection from Fouling: You're in safe hands with us.

As a boat-owner, it could be your most important task: protecting your vessel from the damage and expense of fouling. That's why you need the assurance of a name that's trusted globally. A name that stands for quality and knowledge. We've been working in the yachting industry since 1881, developing world-leading technologies to create the antifouling products you need today.



AkzoNobel

All trademarks mentioned are owned by, or licensed to, the AkzoNobel group of companies. © AkzoNobel 2016.
Use antifoulings safely. Always read the product label before use.



Sam Llewellyn

Flotsam and jetsam

Sam Llewellyn is editor of *The Marine Quarterly*, www.marinequarterly.com, and author of nautical thrillers. Three years ago he bought a Coribee on eBay



'All over northern Europe, it is crane day down at the yard'

I dislike the cut of his jib

Action and intention can all too easily diverge, in the heat of the moment, when crane day rolls around

Spring is slightly in the air, and all over northern Europe it is crane day down at the yard. The crane hire folk have finally given up telling everyone that what with the Government's construction stimulus they may be able to fit them in in October. They have decently accepted double money, and it arrived early this morning, or anyway at about 11 o'clock. And now here is Eric Jenkins getting his Westerly Pageant ready to re-enter its native element with the help of a Romanian crane operator who has never seen the sea.

The slings have been fitted under the hull, and Eric is hobbling round on the deck trying to put the loops on the crane hook. Eric has recently had a hip operation, so perhaps those are scowls of sympathy on the faces of the other 28 owners impatiently waiting

their turn. Or perhaps they are just scowls.

The slings are on, and Eric has made a circular gesture with his upraised finger, implying that he wishes the hook to rise. It rises. As he heads for the ladder he is making a movement of the hand implying that he has forgotten the hand signal for 'stop.' The hook continues to rise. Eric extends his arm downward, forefinger pointing down, and moves his hand in small horizontal circles. The Romanian may not speak any English, but he is fluent in crane, and he lowers away like a good 'un. The slings fall off the hook and Eric makes fierce throat-cutting gestures, which speak volumes to the Romanian, who is also fluent in violence. They start again.

This time the slings stay on. Eric dives for the ladder and lands on terra firma wiggling

the finger. The boat rises, props falling away. Eric taps his hand on his head, because he thinks it looks professional. The Romanian looks at him as if he was mad, because this means 'use main hoist' and he has only got a main hoist. The boat dangles in the air. It is beginning to rain.

Eric extends an arm, fingers closed, thumb pointing

The slings fall off the hook and Eric makes fierce throat-cutting gestures

upward. This means 'raise boom'. The Romanian raises boom. Eric points in the general direction of the sheet of mud-coloured water with one hand, and places the other hand motionless in front of it, seeking to imply that the crane should move slowly. The Romanian does nothing, because the motionless hand is in front of the moving hand, so he cannot see it. Someone in

the crowd shouts that Eric should get a move on. Eric waves them away. The crane driver's eyes light up: an order at last. The boat swings violently towards the crowd, which dives for cover. Eric waves his hands in front of him in a stop-that-now gesture. The Romanian jams on the anchors. There is a fearsome graunching as the slings shift. Flakes of newly-applied antifouling float down like bloody snow.

Eric now seeks refuge in prayer. A devout Catholic, he crosses himself, spectacles, testicles, wallet and watch. The crane driver, raised under Communism, knows nothing of this gesture and takes it as an instruction to lower away. The keel hits the ground with a crunch. Eric flings his hands in the air. The boat shoots into the sky. Everyone in the crowd is now yelling and pointing at the water. The Romanian, a person of excitable temperament, swings the boat over the water and hits the release button. The boat plunges in from a height of 20 feet with a splash like a bomb bursting in which can be seen the masthead light, detached and hurtling towards the horizon. You cannot hear Eric's sobs over the roar of the crane's engine and the sound of everyone in the crowd telling everyone else in the crowd that it is his turn next.

The yard boat tows Eric's boat out of the way, and someone says there, there, and they will get the crane to reinstall the masthead light. But at the

sound of the word 'crane' Eric starts running away, hip and all, and

does not stop. He is later seen at Dan's Vans, shopping for motorhomes.

But sleep and a couple of pints knit up the ravell'd sleeve of care, and by the next day he is sucking his teeth as he watches the other boats craned in, and filling up with diesel, and planning an Atlantic circuit, or anyway a nice picnic with the children on the beach at Blyton Bay.





Innovation
that excites



IT MUST HAVE BEEN TOUGH, BUT THE JUDGES MADE THE SMART DECISION

ALL-NEW NISSAN NP300 NAVARA – INTERNATIONAL PICK UP OF THE YEAR 2016

With crossover-inspired styling, a luxurious interior and new-to-sector technologies such as Around View Monitor, the NP300 Navara wowed a panel of the most experienced commercial vehicle journalists in the world. Boasting up to 3,500kg towing capacity, over one tonne payload and multi-link rear suspension, as well as reduced running costs, it was the obvious choice. **Tough as always, smarter than ever. Visit nissan.co.uk/np300navara**



Fuel consumption figures for NP300 Navara Range: URBAN 32.5-40.3mpg (8.7-7.0L/100km), EXTRA URBAN 46.3-47.9mpg (6.1-5.9L/100km), COMBINED 40.3-44.9mpg (7.0-6.3L/100km), CO₂ emissions 183-167g/km.

MPG figures are obtained from laboratory testing, and intended for comparisons between vehicles and may not reflect real driving results. Model shown is a NP300 Navara Tekna. Refer to Dealer for exact specification. Models subject to availability. 5 Year/100,000 miles (whichever comes first) manufacturer warranty for the NP300 Navara range. Information correct at time of going to print. Nissan Motor (GB) Ltd, The Rivers Office Park, Denham Way, Rickmansworth, Hertfordshire WD3 9VS.



Andrew Simpson

Monthly musings

Yacht surveyor and designer Andrew Simpson cruises with his wife Chele in his own-design 11.9m (39ft) yacht *Shindig*. Read his blog at www.offshore-sailor.com



'In places such as Prickly Bay, Grenada, inflatable dinghies are comparable to the family car'

Take care to guard your own

A couple of simple initiatives might minimise the risk of sailors having their dinghies and outboard motors stolen

There are few more pleasurable cruising spin-offs than sitting on the veranda of a waterfront bar watching crews from the nearby anchorage arrive, either in pursuit of stores from the shops or simply to enjoy the cool pleasures offered for their amusement. The photo that heads this page shows a scene in Grenada, the southernmost of the Windward Islands which, together with the Leeward Islands further north, stand sentinel at the eastern end of the Caribbean.

In such places, inflatable dinghies are comparable to the family car – essential bits of equipment in a sailing environment where, if only on the grounds of cost alone, anchoring is often the preferred choice over the marinas. This particular anchorage is Prickly Bay, a south-facing bay well protected from the easterly trade winds and boisterous seas that come in from over the Atlantic. Somewhere out there is *Shindig*.

As the photographer, of course, I have succumbed to temptation and am in the bar.

In view of their importance, value and mobility, dinghies and their outboard motors are often stolen – not usually by the locals, I'm told, but by impoverished cruisers bent on bolstering their cruising funds by dint of some improvised pilfering. Apparently, a French yacht was boarded by customs last year en route to Costa Rica. It was found to have a dozen or so outboards on board. By way of explanation, the skipper claimed to be afflicted with a rare psychological disorder that caused him to have an obsessive compulsion to collect them. I am not a thief, he claimed, but sick and deserving of sympathy.

Of course, such incidents aren't confined to the Caribbean. While we were cruising the Ionian we heard of an Italian boat bound for Calabria containing a similar number of inflatable dinghies.

The risks for both areas are probably comparable.

Although intensely irritating, these are relatively minor criminal acts, more disruptive than dangerous. However, very much more serious crimes do occur. Back in 2004, we were heading south down the west coast of Portugal and put into Peniche, a busy fishing port. Hospitable as ever, the Portuguese had provided a handful of visitors' berths where we found an empty

As for outboards, many sailors apply stickers – the more garish the better

slot and tied up. On the other side of the pontoon was a British yacht neatly secured and with a hefty lock on its main hatch. Its general tidiness somehow had almost the look of some permanence about it. Later that day we were to understand why.

It seems that the boat had put into Peniche about three weeks earlier. Its sole occupant, a genteel Englishman nudging towards elderly, was in a state

of some distress. He said his wife had vanished overboard while standing a solitary night watch. His VHF was out of order so he could summon no assistance. He had spent the whole of the next day retracing their course in an effort to find her.

The response amongst the locals was generous in its compassion and magnanimity. Fellow sailors sorted out the boat for him; the local priest arrived to console him; the whole town joined him in his grief. Until the news broke a few days later that a fishing boat had recovered a woman's body in its nets; more specifically, a woman with her arms tied behind her back and her ankles bound. Identification was swift. On their boat were photographs of the pair together. Never before had sympathy evaporated so quickly. Our worthy gent was now in prison awaiting trial.

But back to our dinghies: how can one minimise the risk of theft? You hardly ever see it in Europe, but tethering them securely is the Caribbean response – either with stainless steel chain or plastic-coated flexible wire (such as is used for guardwires) with swaged loops at each end. Pass one end of the tether through suitable places on both dinghy and outboard, and padlock the other end to a convenient cleat ashore.

Then there's the defacement deterrent. Your boat's name on the dinghy is a favourite ploy and may help identify you as the owner if a miscreant is apprehended. For

short-term use you can even use an indelible felt-tip pen. Their ink fades rapidly in the sun, but it takes no more than a few minutes to restore it. As for outboards, many sailors apply stickers – the more garish the better, and readily available in the form of promotional logos.

So the irony is that adornments designed to attract might actually deter the light-fingered.





Lofrans'
WINCLASSES



Lofrans Tigres Windlass
RRP £1,315.05
FROM £879.95

Lofrans'
WINCLASSES



Lofrans Cayman Windlass
RRP £1,175
£929.95

LEWMAR® Pro Series Windlass



**LEWMAR
PRO SERIES
WINDLASS 1000
ONLY £579.95!**

Lofrans'
WINCLASSES



Lofrans Kobra Windlass
RRP £1,016
£749.95

Lofrans'
WINCLASSES



Lofrans Royal Windlass
RRP £569.00
£389.95

HARKEN®



Harken Radial Winches
RRP £443.15
FROM £319.95

LEWMAR®



Lewmar Evo Self Tailing Winches
RRP £393.16
FROM £299.95

OUR CUSTOMERS RATE US AS EXCELLENT 9.6!



MARINE SUPER STORE

marinesuperstore.com

02392 219 433

Port Solent • Chichester



Valid until 30th April 2016 only



The Révolution 22. Designed by David Raison, these aluminium-hulled and scow-bowed cruisers look like nothing else afloat. Internal volume – thanks to ‘that’ bow – is astonishing in both the 22 and the 29

Mini Transat-inspired boats



The Mini Transat race has been at the cutting edge of boat design since its inception in 1977. Peter K Poland discusses the influence the event’s ‘flying machines’ have exerted on ocean racers and modern production yachts alike

Every two years, many sailors (mostly young) set sail from the French coast in high-performance 6.50m yachts to race single-handed to the Canaries and then on across the Atlantic. Some people reckon they are loonies. Others – myself included – believe they are the

maritime equivalent of ‘those magnificent men (and women) and their flying machines’. Over the years, many of these intrepid Mini Transat sailors have gone on to become international sailing superstars, while the unfettered development of their ‘flying machines’ has exerted a major and ongoing influence on modern production yachts and ocean racers of all sizes.

And fly these machines do. In the 2015 Mini Transat, Julien Pulvé managed a day’s run of 278.7NM at an average speed of 11.6 knots in his Ofcet 6.50 production (Series) class yacht, while overall winner of the Proto Class Ian Lipinski covered 3,285 miles at an average of 9.25 knots. Out of the 2015 entry of 72 boats (26 Proto and 46 Series), only two needed external assistance due to damage. All the others made port under their own steam, proving that these Mini Transat 6.50s have come a long way since the hairy early days when some sailors lost their boats and others their lives.

Like the original OSTAR (Observer Single-Handed

Transatlantic Race), invented by former Cockleshell Hero Blondie Hasler and first won by Sir Francis Chichester, and the first non-stop solo Round the World race – the Sunday Times Golden Globe, won by Robin Knox-Johnson – the Mini Transatlantic race was also dreamt up by a Brit. We have always had an aptitude for inventing things, be they the computer, the jet engine, the internet or single-handed yacht races: we just don’t seem to be so adept at cashing in on them.

Early entrants

Bob Salmon invented the Mini Transat in 1977, aiming to bring trans-ocean solo sailing back

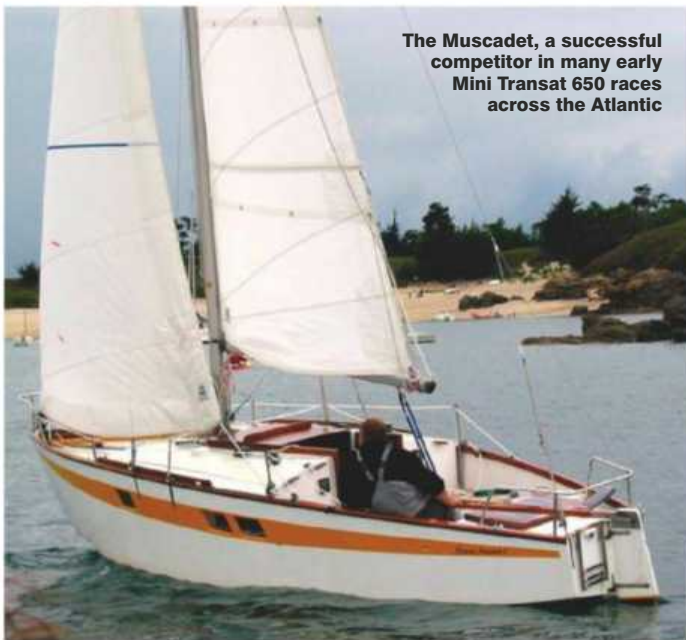
ABOUT THE AUTHOR

Peter K Poland crossed the Atlantic in a 7.6m (25ft) Wind Elf in 1968 and later spent 30 years as co-owner of Hunter Boats. He is now a freelance journalist.





A typical production Mini 650 interior... plenty of space, but not a lot of creature comforts. The lighter they are, the faster they go!



The Muscadet, a successful competitor in many early Mini Transat 650 races across the Atlantic

within the budget of 'ordinary' sailors. Ignoring detractors and prophets of doom, he completed the inaugural race from the Penzance Sailing Club to Antigua in an Anderson 22. Having suffered rudder failure just outside English Harbour, drifted onto a reef, been towed clear and then sculled by Salmon across the line, *Anderson Affair* was the first British entry home.

Predictably, a large French contingent took part. Since Eric Tabarly had become a national hero after winning the second OSTAR in 1964, his countrymen took to long-distance solo sailing with a vengeance. It was no surprise, therefore, that the first Mini Transat was won by a Frenchman – Daniel Gilard in a Serpentine class cruiser. Ironically, the major problem for many of the French competitors was just getting to Penzance to start the race, because the Affaires Maritimes forbade

prototypes from crossing the Channel. So they had to sneak across unobserved.

Amongst the inaugural 1977 Mini Transat fleet were many slightly modified production boats that still give good service today. An early Finot-designed *Rêve de Mer* took third, a Dufour-designed *Sylphe* did well and the Harlé-designed hard-chine plywood 'boîte' better known as the Muscadet enhanced its name with five finishers, two of which were in the top 10.

The second Mini Transat in 1979 saw the first prototype yacht built specifically for the race: and it wasn't French! American Norton Smith commissioned *American Express* as a downwind flyer with broad beam, special running sails and twin water ballast tanks, and duly showed the French the way home. More interesting was the new Gros Plant design developed by Philippe Harlé, based on his mighty Muscadet. Still with a hard chine plywood hull, the Gros Plant boasted many new features including a considerably wider stern. Jean-Luc Van Den Heede piloted one to second overall and designer Harlé took the helm of another, coming fourth. This race also saw Bénéteau enter the fray with a couple of modified First 22s.

Further down the fleet, the Brit John Tomlinson put up a fine performance in a modified Julian Everitt-designed E-Boat, *Smiling Tree*. A slightly shortened stern, extra laminate, beefed-up rig and

heavy-duty rudder were the main changes. John gave a lucid description of what it was like to undertake a Mini Transat in those early days, writing: 'In the week before the start, the other boats begin to arrive. With only three main rules (the boats must be 6.5m maximum length, be self-righting and carry no more than six sails) there is a great diversity of designs, from Norton Smith's *American Express* to Margaret Hicks' Hurley 22 *Anonymous Bay*, with the E-Boat coming halfway along the scale in terms of speed and weight.'

'It is obvious that I am not going to win the race. Just one look at the assembled machinery makes that absolutely clear, but to do well amongst the production boats would be an achievement. We manage to pass scrutineering OK, which is more than can be said for some of the others. *Smiling Tree* is well prepared. There are one or two boats here that I wouldn't take for a trip on the River Thames. It is difficult enough being only 6.5m long and having 4,000 miles of ocean in front of you: but to build and rig your chosen steed like an Osprey dinghy, as some of these guys have, is asking a bit too much of lady luck. You have to try to stack the cards in your favour, even if you don't know how they will be dealt.'

He describes events shortly after the start, saying: 'Enda O'Coineen is just behind me in the Limbo 6.6 *Kilcullen 2*. The next day, in light winds, I cross tacks with Bob



Jeanneau's Sun 2000, and some smaller Firsts, show a Mini Transat influence with their upright stems and sleek lines

Salmon's *Anderson Adventurer*, but he is not on deck so he does not see me. It is a good job someone is awake around here.

'Middle of the night, October 6. The wind is up to full gale plus a bit, from the south. I have three reefs in the main and no jib on at all. Heading west at about four knots on the log, the noise down below is ear-splitting, with the flat-bottomed bow slamming into every breaking wave. I cannot sleep or cook any food. I am living on GORP (good old raisins and peanuts). It is very uncomfortable.'

Later, he writes: 'A horrible black morning... squally, wet and windy. Then a real gale, then flat calm again. Very frustrating, and not much progress. Changing rig continuously all day. Up spinnaker. Only for a few hours, though. Drop the kite, sheets in again. So it goes on, day after day. Feeling a need now for fellow human beings.'

Then, approaching Tenerife: 'I have to scull the last two miles in the dark. Elapsed time is 16 days, 12 hours, 42 minutes. Too long, really: however, only 12 boats are in before me so I am not the slowest. *American Express* arrived first, nearly four days ago, followed by a bunch of the French boys.'

From Tenerife to Antigua, John took 25 days. He writes: 'I am just a few short steps from my first Planters Punch. A lot of the other boats are in and the welcome is beautiful. I only manage to finish 19th on this leg but hold my 13th place overall, which is about fourth production boat. I feel quite pleased with myself. I have sailed over 4,200 miles, single-handed, in an overgrown Enterprise dinghy, at an average speed of just under 5 knots – and that's not slow by any standards.' All of which sums up the highs and lows of Mini Transat racing.

Exciting innovations

In the next Mini Transat (1981), Brian Sanders took *Smiling Tree* (renamed *Age of Steam*) on a second successful jaunt, joined by Ian McDonald who raced another E-Boat called *Ocean Delivery* across. And this was no mean feat, because cyclone Irene wreaked havoc on the first leg of the race, with only 13 of the 29 entries completing the course. The overall winner was a prototype designed by the young Jean Berret.

In 1985, the French took over the race. Founder Bob Salmon



Coco class Mini Transat yachts before the start of the Vannes-Azores-Vannes race in the 1990s

had followed his dreams and – against all the odds – established an event that had become a success. But now he felt it was time to hand over the reins, and journalist Jean-Luc Garnier set about convincing the establishment that the event was well founded. He obtained the support of the town of Brest, and the Mini Transat rules became tighter – including 'unsinkability' and specifying compulsory safety equipment. Yves Parlier won overall, becoming the first sailor to use a carbon mast: an innovation that soon became commonplace on leading race boats around the world.

The 1987 event saw another breakthrough. Coming second overall and first production boat, the new Harlé-designed Coco class, sailed by the great Laurent Bourgnon, had a pronounced rounded bow.

Since the very first Mini Transat in 1977, many of the boats had adaptations that were way ahead of the times. This largely trade wind race encouraged the use of features such as twin rudders, twin daggerboards and movable ballast. In 1991 Michel Desjoyeaux pioneered the use of asymmetric spinnakers set on a long bowsprit on a Fauroux-designed Mini that also featured a canting keel and pivoting carbon mast.

However, the 6.50 class now realised that there was a risk attached to all these exciting yet high-cost innovations. There was a chance that the boats could become so expensive that 'normal' sailors would become excluded, so the Minis were divided into Prototype (Protos) and Production (Series) classes. The Protos are custom-built while the Series class is for production boats, featuring a simpler 'box rule' that stipulates alloy spars,



The Yaka 650, an example of a neat twin-keel French cruiser developed from a Mini Transat 6.50 racer

GRP or wood (no carbon) construction, fixed keels, less draught and shorter rigs etc. Put simply, the Protos now represent the cutting edge of innovation while the Series boats have wider appeal. Indeed, there are now several new Series designs that are not only much cheaper than Protos but also boast desirable modern design features – and several of these boats give the exotic Protos a real run for their money.

Adventure and intensity

So, are any Brits making names for themselves in these remarkable little yachts these days? The two most famous in recent years have both been female. Back in 1997, a very young Ellen MacArthur took her first step on the ladder of international solo-sailing fame by coming a creditable 17th in a Mini called *Le Poisson* that she bought second-hand then refitted herself



British sailor Nikki Curwen and her Proto Mini 650



Bruno BOUVRY/Teamwork

David Raison's revolutionary *TeamWork Evolution* ran away with the 2011 race

Peter K Poland

Lizzie Foreman on her *Pogo 2 Hudson Wight* at the start of the 2014 Royal Southern YC cross-Channel Mini race

in a French boatyard, later saying: 'It is this race that gave me the taste for offshore racing. I will never forget it.' Then in the 2001 edition Sam Davies came 11th, saying: 'This is a very difficult race, but it is awesome. The atmosphere and the spirit of this race really made a deep impression on me. Even if you're a foreigner, everyone helps you and everyone supports everyone. We all share the same wish and the same motivation.'

In the 2015 race, two more British women joined the fray. Nikki Curwen, 27, is a 'chip off the old block' Mini sailor: her father Simon finished second overall in the 2001 race. She entered her *Go Ape! Live Life Adventurously* and finished a creditable 12th in a very hot fleet. When I asked what appealed most about Mini sailing, she replied: 'I love the adventure and intensity of the racing, and the boats are incredible to sail. I much prefer the long-distance races to the Azores, Caribbean etc. I've owned the Mini since the beginning of 2014 and sailed around 12,000 miles in her, with a mix of races and deliveries. The

Mini is the most enjoyable boat I've ever sailed: so responsive but also stable, you can really push the limits. I will admit upwind in a bit of chop isn't ideal, but then it isn't for any boat, really! Minis are just giant surfboards, 3m wide, 6.5m long. They are designed to surf down the waves, and can reach speeds exceeding 20 knots. What's not to love?

'Almost everything in the boat can be controlled from the cockpit. With a reefable main and jib they are very manageable, even in heavy weather. While they are tiny, and people say I'm crazy to cross the Atlantic in such a small boat, I can honestly say the Mini is the safest and most robust boat I've ever sailed.'

Lizzie Foreman joined the 2015 Mini Transat fray in the Series division, sailing the borrowed 10-year-old *Pogo 2, Hudson Wight*. She told me: 'I didn't get into Mini sailing until I was 22, helping out with the Artemis Academy's *Pogo 2*,' adding: 'The Artemis Offshore Academy really is the place to gain solo offshore racing experience.'

To get her Mini campaign off the

ground, Lizzie moved to Brittany to train with Lorient Grand Large and lived in her van (and the boat) to compete on the circuit. Much as Ellen MacArthur and Sam Davies before her, she went native to hone her solo sailing skills in France. 'I love Mini racing because it's so pure. We have the bare basics for communication and navigation – just a radio and a GPS, with no cartography allowed. This means you have to plan well for the offshore races, creating quick reference cards and lots of waypoints to minimise the amount of chartwork during the race.'

'The solitude is a challenge at first, but I'm now accustomed to spending 10 days or more at sea without making any contact with land or other boats. Heavily over-canvased, Minis surf like skiffs and require constant attention to stay upright! Less adventurous sailors who like speed should try a Mini – you don't need to cross the Atlantic solo to enjoy one. They are easily

manoeuvrable with an outboard engine, the sails are light and can be carried around on board and ashore by one person, the boat can be towed... I can't really think of any boat more fun than a Mini for a weekend blast on the water.'

Massive changes

To get an idea of what goes into a modern Mini, I spoke to designer Simon Rogers. He has made a name for himself on the Mini, Class 40 and fast superyacht circuits. 'Proto Minis,' he said, 'are like rally cars. Fast, rugged yet light. On the top Protos, scantlings can be so light that only tight-weave carbon fibre keeps the water out. Designers have free rein with Protos and can try just about anything; canting keels, daggerboards, foils, square-topped mainsails et al. Minis have also brought massive changes to power generating with improved solar panels and batteries. This is essential for autopilots that become ever more sophisticated and effective.'

Electronics manufacturers NKE and B&G seem to lead the field at this level of high-speed sailing. Sophisticated modern autopilots have revolutionised solo racing. 2015 Mini Transat winner Frederic Dennis described night sailing in heavy winds: 'I went upstream of the fleet, which was a lot of work for the autopilot (NKE). At that time, the autopilot was better at the helm than me, handling the power and acceleration of the boat. I really increased the gap in the race.' And that's how you win.

Simon Rogers is also impressed by the latest 'scow bows' and fuller forward sections, saying: 'Short fat hulls tend to stand on their diagonal and bury the bow.'



Jacques Vapillon / Mini Transat Îles de Guadeloupe

Nautipark (Frederic Denis) wins in the Proto class in 2015. Note the daggerboards, canting keel, chine, flat bottom and twin rudders

Fuller and “scow bows” put volume forward and move the bow waterplane further outboard, making the boat more stable and level fore and aft. They are also good upwind because the waterplane moves out and the bow doesn’t bury. Off the wind they generate extra lift and earlier planing. They also add greatly to interior volume.’

David Raison’s ‘scow-bowed’ Magnum set the cat amongst the pigeons on the 2011 Mini Transat. His logic was that width added to the stern gives more power; so why not at the bow as well? When heeled, the hull retains the same immersed profile, the bow doesn’t dig in and wetted area is reduced. His computer models showed that the concept worked better than traditional lines on all points of sailing. The proof of the pudding? Raison’s *TeamWork Evolution* won by a country mile in 2011. Renamed *Prysmian* by Giancarlo Pedote for the 2013 race, it was pipped into second place but was widely felt to be faster than the well-sailed winner. Then in 2015, Davy Beaudart’s *Flexirub* (a Raison-designed ‘scow upgrade’) won Leg 1 easily and was well ahead in Leg 2 before retiring with shredded spinnakers and a damaged transom.

Two top production models in 2015 – the new Bertrand-designed Ofcet 6.50 and Verdier-designed Pogo 3 – also feature very full bows. They’re not as extreme as Raison’s ‘scows’, but far fuller-bowed than other ‘series’ boats. They are fascinating, and – like the more extreme ‘scows’ – could have a huge influence on future designs.

Simon Rogers said: ‘The Pogo 3 and Ofcet 6.50 are not “scows” but have big bow radiuses at deck level, making the waterline shorter when upright but longer when heeled. The volume of the



Jacques Vapillon

Davy Beaudart’s *Flexirub* easily won the first leg of the 2015 Mini Transat before having to retire on the second leg with shredded spinnakers and a damaged transom



The Django 670, a lift-keel cruiser loaded with Mini Transat genes



Ofcet 6.50: one of these won 2015 Mini Transat ‘Series’ production class. The rounded bow and chines contribute to speed and stability

topsides keeps the bow up and improves lift for early planing. The only weakness is light air speed. The extra volume is beneficial to cruising yachts, provided the aesthetics are acceptable. Clever styling helps. The chines enhance performance on light boats, but not on heavier ones. However they increase space, stability and sail carrying power on cruisers.’

What’s out there?

So, if you fancy some fast fun in a production Mini 6.50, what’s out there? Regrettably, not a lot in the UK – but there’s no shortage across the Channel. In addition to

the brand new Ofcet and Pogo 3 models, the slightly older Lombard-designed Argo (third in 2015), the Nacira 650 (fifth, seventh and 10th) and the evergreen Finot-designed Pogo 2 (sixth, eighth and ninth) all featured in the top 10. Edouard Golbery (aged 28), who came in sixth in his Pogo 2, said: ‘I started two years ago. When I bought the boat I didn’t even know how to make a tack.’ Meanwhile, Thomas Guichard (aged 34), whose Pogo 2 came eighth, said: ‘Two years ago, I came to cross the Atlantic and to act out my dream of adventure. This year, the sporting objective was more important: I was less inclined to contemplate the sunrises and sunsets, and it was incredible to sail the Atlantic at that speed.’

Going further back in history, the Coco, Rolland-designed Pogo 1, Super Calin, Mistral 650, Dingo, Tip Top and Dingo 2 are all great little boats. And then there are the Mini-influenced fast cruisers. French yard Marée Haute has built many twin- and lifting-keel flyers, from the Django 6.70 and 7.70 right up to a 12.70m development. Pogo Structures has also developed some exciting fast cruisers from its Mini Transat and Open 40 class racers. You may

have marvelled at the Pogo 30 and Pogo 1250 models at recent Southampton Boat Shows.

Afep Marine’s new Révolution 22 and 29 models are the most dramatic Mini spin-offs. Designed by David Raison, these aluminium-hulled and scow-bowed cruisers look like nothing else afloat. Internal volume – thanks to ‘that’ bow – is astonishing in both the 22 and the 29. The French nautical magazines already seem impressed by the performance and potential of the 22. Raison told me the Révolution 35 project has also just started, saying: ‘This is very promising. Freeboard and aluminium structure load can be better managed at this size. The boat will offer enhanced performance and comfort with light scow aesthetics, and three twin cabins.’ The big question is whether people will accept these aesthetics. Only time will tell. The added accommodation is undoubtedly a bonus, and the French do have a habit of breaking with tradition and coming up with winners.



The Pogo 3’s rounded bow is efficient upwind and downwind

NEXT MONTH

Aluminium-hulled cruisers: the Allures 45 and Exploration 45

SUBSCRIBE TODAY

FROM JUST

£19.99

every six months



FULL SUBSCRIBER PACKAGE

HOME DELIVERY

Get every issue delivered direct to your door, wherever you live in the world.

DIGITAL EDITION*

Instant access to the iPad and iPhone editions is included at no extra cost.

FREE REWARDS**

Every month enjoy new offers, giveaways and prizes exclusive for subscribers.



Subscribe online at **pbo.co.uk/April2016**



Call us today on **0330 333 4555**

7 days a week from 8am to 9pm (UK time) Overseas: +44 (0)330 333 0233. **Quote code 18F**

The advertised rate is the six monthly Direct Debit subscription price. Offer open to new subscribers only. Direct Debit offer open to new UK subscribers only. Final closing date for all orders is 30th April 2016. Please allow up to 6 weeks for delivery of your first subscription issue, 8 weeks for overseas orders. *The digital version comes free with the print edition of your subscription and is available strictly on a trial basis. Time Inc. UK Ltd reserve the right to withdraw free access to the digital version at any time. **The Rewards scheme is available for all active print subscribers of magazines published by Time Inc. (UK) Ltd, free of charge. It is also available to digital subscribers as long as the subscription has been purchased directly through the publishers at magazinesdirect.com. Only the recipient of the subscription is entitled to access Rewards. Full terms and conditions are available at mymagazinerewards.co.uk. The full subscription rate is for 1 year (13 issues) and includes postage and packaging. If the magazine ordered changes frequency per annum, we will honour the number of issues paid for, not the term of the subscription. Credit/debit card charges will be taken in sterling. For enquiries and overseas rates please contact magazinesdirect@quadrantsubs.com or call +44 330 333 0233.

5 sets of dinghy wheels



Moving your dinghy around when ashore can be a drag, so Ben Meakins tests a variety of flip-down dinghy wheels and alternatives to find out which are best suited to different types of terrain

Dinghies are in their element on the water – but drag one ashore, and you’ll soon find it’s as manoeuvrable as a brick. Ideally, you want some sort of amphibious craft – but unless you plan to head down the aquacar route, here’s where a set of wheels comes in handy.

Dinghies come in all shapes and sizes. If you’ve got a dedicated

launching trolley, that will make life much easier, but flip-down wheels mounted on the transom have advantages: there’s no messing around with trolleys, you can move the dinghy single-handed, and you can take them with you wherever you go. We rounded up five options that are readily available from the chandlery shelves, bolted them to the back of a Zodiac Zoom 2.6m dinghy, and put them to the test.

Dinghy wheels on test

Waveline dinghy wheels

PRICE: £66.99

AVAILABLE FROM £54.95

Max load: 125kg

Contact: www.force4.co.uk



This set of wheels is made from a lightweight fibre/nylon mix with stainless steel springs and fixings, and has three positions – locked down, at 90° (good for manoeuvring a dinghy standing on its transom), and locked up for when afloat. They are well made and trundled our dinghy around well. They coped admirably with concrete and hard sand, but were harder work on gravel, soft sand and shingle, as their small size might suggest.



These wheels coped well with most surfaces. **INSET** They can be locked in three positions

Dinghy dolly wheels

PRICE: £89.45

AVAILABLE FROM £59.95

Max load: 200kg

Contact: www.force4.co.uk



A similar design to the Waveline dinghy wheels, although from a different mould and with thicker ‘arms’, these dinghy dolly wheels can take up to 200kg. They also have three positions, allowing you to lock the wheels up, down or in an intermediate position. In their up position, they sit tucked into the transom. Like the similar Waveline wheels, they coped well with hard surfaces but struggled somewhat with gravel.



Similar to the Waveline wheels, these are compact. **INSET** When folded, they tuck up neatly to the transom

Dinghy wheels on test

Inflatable boat roller

PRICE: £19.95

Max load: 400kg

Contact: www.force4.co.uk



Harking back to the days when boats were launched on rolling logs, these inflatable boat rollers from Trem are a good way to move boats around occasionally – whether they're heavy boats being transported up the beach for a spot of painting, or tenders being conveyed to the water. This one is made from PVC and can take loads of up to 400kg. Ideally you'd have at least two and preferably more, so that you can take the one that pops out under the stern and place it under the bow as the boat rolls along. We found it a really easy way to move our heavy inflatable up the beach, and the thick PVC managed to cope with sharp stones as it rolled over them – although regular use might cause more damage. These could double up as buoyancy bags for a rigid dinghy – a useful multi-purpose role?

A roller or two proved a useful way to move the dinghy around



Eckla Explorer 260 canoe trolley

PRICE: £89.95

Max load: 100KG

Contact: www.eckla.de/en



A further option for occasional boat movements is a canoe/kayak trolley. This one is designed for large Canadian canoes, and folds up into a storage bag. It has a kick-down support to help loading the boat onto it, and uses the same wheels as the transom wheels featured above. It coped well with all the surfaces we tried it on and, in fact, being able to balance the boat with the trolley in the centre made it easy to wheel around. The only issue was the boat slipping forward or back, which can be countered by lashing it down with a strap.

This canoe trolley could be placed so the boat was well balanced



Waveline transom wheels

PRICE: £129.95

Max Load: 100kg

Contact: www.force4.co.uk



These are a different kettle of fish, comprising 260mm pneumatic tyres mounted on the end of stainless steel legs. These are longer than the other Waveline product and the dinghy dolly wheels, allowing you to move the boat around with the outboard down. When mounting, take care that the brackets are far enough up the transom to allow the wheels to fold up clear of the transom. In use, the pneumatic tyres gave us much-improved performance compared to the other sets of wheels, tackling gravel and soft sand with ease and giving a much smoother, quieter ride over hard surfaces, as you'd expect.

The wheels lock up or down by sliding over a cotter pin, with lugs further up the legs locating in cut-outs. We found that these weren't a particularly positive fit, and could jump out while rolling over large lumps. However, more weight – particularly an engine – would help with this problem. We also found that their long legs meant that you had to immerse the boat a long way on a shallow slipway before you could climb in. They would be better for steep slipways.



Much longer-legged, these coped well with soft surfaces. INSET However, the legs could jump out of their locks

PBO verdict

All these methods worked well – and your choice will depend on the type of boat you wish to transport.

For inflatables with rigid transoms, the Waveline and dinghy dolly wheels would work well and fold up unobtrusively. However, much also depends on the type of slipway you're likely to be using. Anything hard and the small wheels do well, but as soon as you get to soft mud, sand and shingle, the bigger wheels would be beneficial.

The canoe trolley was a useful option that didn't require bolting anything to the boat, and it would work well as long as you're not carrying too much weight. And if you're in the habit of only moving your tender once or twice a year, then the rollers would be a good option – but they might not last too long with regular use over rough ground.



As you'd expect, small wheels are less good for soft ground

Mooring under sail

Picking up and leaving a mooring under sail can be anything from quietly satisfying to absolutely essential. David Harding explores some techniques

You don't often see people sailing on to a mooring these days. It's easier and quicker – and safer, in many instances – to drop or furl the sails and make the approach under engine. Nonetheless, picking up a mooring under sail is a useful skill.

Engines do break down. Water intakes get blocked, impellers give up, air gets into the fuel, lines get caught around the prop – and so

on. We have all had these things happen to us and there's never a convenient time.

Even if you're not forced to sail, sometimes it's simply nicer to avoid disturbing the peace and to slip in – or away – without firing up the donk. The trouble is that there are so many combinations of wind, tide, obstructions and boat behaviour to take into account. Established techniques exist for wind-with-tide and wind-against-tide, but you still have to work out

the best approach in any particular situation, be ready to modify it on the hoof and then be prepared to have another go if it doesn't work out the first time – which there's a good chance it won't.

Getting ready

For our moorings session we went out into the harbour with *Enigma*, an MG 346 that's fitted out more for racing than for cruising – hence the laminate mainsail and the absence of a roller-reefing system

for the headsail. We deliberately under-canvassed her, using an old Dacron jib and tucking a reef in the mainsail to slow things down and minimise the noise and wear of flogging sails.

Our plan was to show the correct approach and, in some instances, also how not to do it. A conveniently empty winter harbour meant we didn't have to dodge around other boats – a luxury you won't usually be able to enjoy, but one that makes it easier to see what's going on.

Wind and tide together

Picking up the mooring

In theory, this one of the more straightforward manoeuvres.

There's still plenty of scope for getting it wrong, though, whether you make your final

approach with both sails or under mainsail only. In this instance the tide was weaker than expected but still running in the same direction as the wind, from left to right.

TOO FAST



1 The buoy in the foreground is the target. *Enigma* is currently upwind of it...

2 ...so she sails on a broad reach to get downwind. Now almost directly downwind of the buoy, she rounds up so the sails lose drive.



3 Although some distance away before rounding up, she had been moving fast and is carrying her way. Pushing the mainsail out can help act as a brake...



4 ...but it's not enough to stop her. There's no point in trying to pick up a mooring at this speed. Some boats just carry their way more than others.

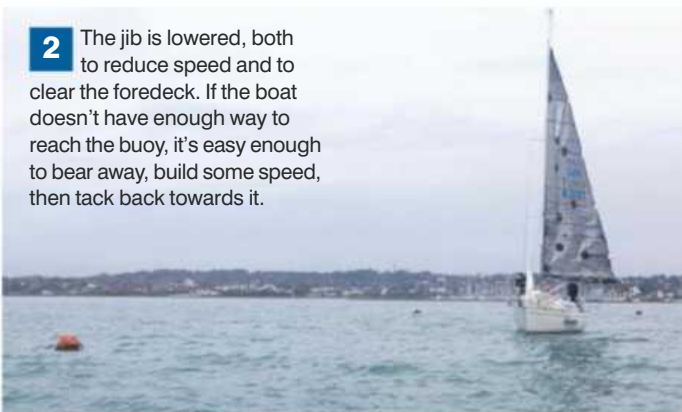


THE RIGHT SPEED

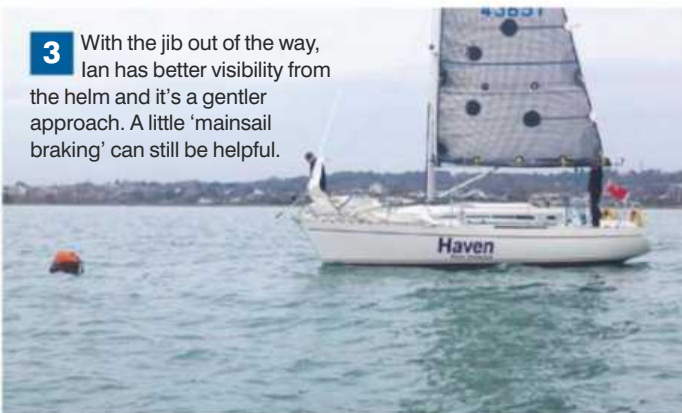
- 1 Rather than position themselves further away this time, Ian and Neil round up closer downwind.



- 2 The jib is lowered, both to reduce speed and to clear the foredeck. If the boat doesn't have enough way to reach the buoy, it's easy enough to bear away, build some speed, then tack back towards it.



- 3 With the jib out of the way, Ian has better visibility from the helm and it's a gentler approach. A little 'mainsail braking' can still be helpful.



- 4 **A PERFECT PICK-UP.** Sometimes it's best under two sails but, in instances like this, mainsail only can make life easier.



Using the mainsail brake

It's not always easy to know how much way a boat is going to carry and, therefore, how far downwind of a mooring you need to be before rounding up into the wind. If you stop short of the buoy when head-to-wind, there's no way to make up the distance. You have to peel away on one tack or the other and go round again.

If you're moving too fast, it makes life hard on the foredeck and, should you manage to pick up the buoy, the boat will override the mooring and swing round. High-speed pick-ups are best avoided where possible.

The problem is that the speed you typically need to maintain

steerageway on the approach will be too much once you have reached the buoy. That's why, when using the engine, you engage reverse. Under sail when head-to-wind, your best 'reverse gear' is the mainsail.

If you have enough hands to push the boom out, make use of them. You won't stop the boat dead in the water or kill enough way if you're still charging along, but it will often be enough to make a meaningful difference.

This isn't an orthodox technique and you always need to be careful, both when pushing out the boom and when letting it go again.



As the mooring is being picked up, Ian can leave the helm and push the boom out to help stop the boat overriding the buoy



Wind and tide together – leaving the mooring

This should be as straightforward as can be, nearby moorings or obstructions notwithstanding. Most important is to be able to determine on which tack you sail away. Sometimes it won't matter;

on occasions it will be critical.

In theory, once you have dropped the mooring and established stern-way you can use the helm to steer the boat. In practice, however, the wind is more likely to

blow the bow off one way or the other first, making the decision for you. So how can you exert any influence? If, for example, you want to head off on starboard tack, it's often enough just to hang on to the

mooring, wait for the stern to swing to starboard and then drop the buoy from the starboard side to encourage the boat to go to port. Alternatively, try one of the techniques shown here.

MAINSAIL ONLY



1 This is about as head-to-wind as a boat can be.



2 As Neil prepares to let go of the mooring, Ian holds the boom out to starboard and the bow swings to port.



3 With the wind now well off the starboard bow, Ian releases the boom and returns to the wheel.

4 Safely away on starboard tack. There was never any doubt about which way the boat was going to go.

Wind and tide together – leaving the mooring

BOTH SAILS



1 Neil hoists the jib with the sheet already around the port winch, so it starts blowing the bow to starboard straight away.



2 The jib is now fully hoisted and, in the cockpit, Ian sheets it in a little harder.



3 That's pretty definite – they're going to be heading off on port tack.



4 Now it's just a matter of bringing the jib across. Mission accomplished.

Sailing in astern: how to gain and maintain control

Leaving a mooring under sail with wind and tide together (or with no tide, which calls for the same general approach) is one of those situations when it can be useful to know how your boat handles in astern. You won't usually need to drop back very far to clear the

buoy and, if you use one of the techniques we've just shown, you should soon be under control.

Inevitably, however, there will be times when the boat is moving astern with the wind on the bow and lots of flapping going on. All too often you see someone at the

helm looking bemused, thinking the boat is about to head off in one direction, getting set accordingly and then finding it's actually going the other way. There's rarely a need for this uncertainty: by using the rudder, pushing out the boom or backing

the headsail – possibly a combination of any of these – you should be able to persuade the boat to go the way you want.

Sailing in astern can be such a useful skill that we devoted a feature to the subject in PBO August 2002.

Wind across tide Picking up the mooring

This can be a tricky one. Your approach will be determined by factors that include the relative strength and angle of wind and tide and by how easily driven your boat is.

Here we start by showing a definite no-no for this situation, which is to approach using both

sails. Picking up the mooring is one thing; the problem is what happens next. Jib-only is the answer, but you still have to work out the angles.

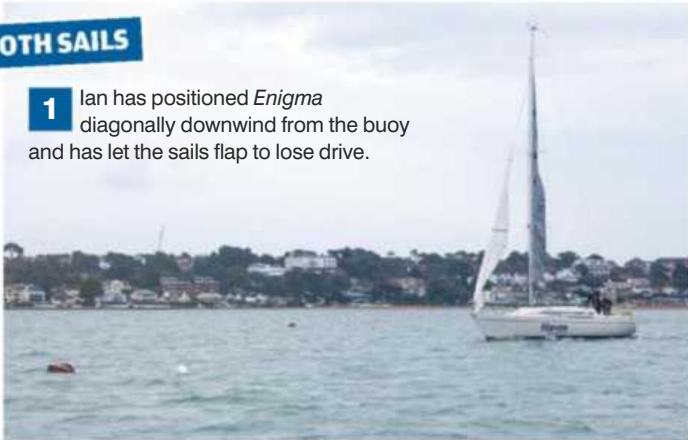
As you look at the photos in these sequences, the tide is running from left to right and the wind is coming from over your starboard shoulder, roughly at right-angles to the tide.

Strangely enough, our challenge was the weakness of the tide and the fact that *Enigma* – a race-tuned boat that had just won Class 1 in the Poole Winter Series – is very easily driven. This precluded the 'textbook' approach – against the tide, with the wind on the beam under jib only – because she was

still sailing too fast even with the jib flapping. A roller-reefing headsail would make life easier because it can be rolled away progressively – and rolled out again if need be – to control speed. A typical cruising yacht also takes more pushing through the water, so slowing down is less of an issue.

BOTH SAILS

- 1** Ian has positioned *Enigma* diagonally downwind from the buoy and has let the sails flap to lose drive.



- 2** Now he rounds up to make the approach on a close reach, so the sails can still be sheeted in to provide power if needed.



- 3** It's a nice controlled pick-up, making life easy for Neil with the boathook...



- 4** ...but then the inevitable happens. The boat swings to the tide, the mainsail fills and she starts sailing over the mooring.



Wind across tide – picking up the mooring

JIB ONLY

- 1** This time the mainsail is already lowered and the approach made from further downwind. The wind is on *Enigma*'s port bow and the tide is sweeping her gently from left to right.



- 2** Again it's a well-controlled final approach for an easy pick-up. If the tide swings her round and she starts overriding the mooring, it doesn't matter because now it's just a matter of lowering the jib.



Wind across tide – leaving the mooring

This is often undemanding, although elements can always conspire to make any manoeuvre more complicated than it should be.

1 First hoist (or unroll) the jib...



2 ...then drop the mooring and sail away. You can round up and hoist the mainsail at your leisure.

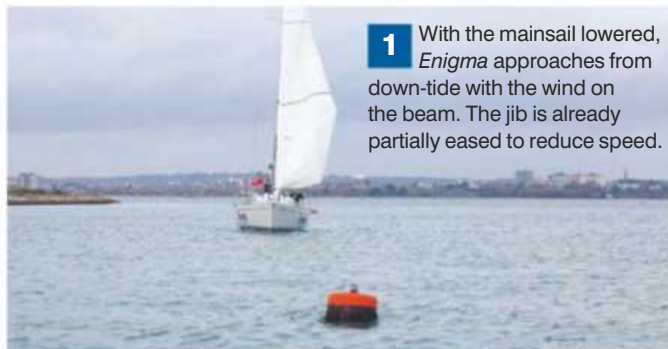


Wind across tide – picking up the mooring: A simpler approach

Having experienced a wind-across-tide situation where the brisk wind and weak tide ruled out the use of orthodox techniques, we sought out another mooring where the tide was stronger and the wind lighter. This would allow us to demonstrate a more conventional jib-only approach.

In this sequence the wind is coming from the left of the photos and the tide from behind the camera.

1 With the mainsail lowered, *Enigma* approaches from down-tide with the wind on the beam. The jib is already partially eased to reduce speed.



2 A gust comes along, so Ian lets the jib flap and bears away to get further downwind and reduce speed on the approach.



3 *Enigma* is making gentle headway directly into the tide. The jib is producing drive even though it's flapping, but can always be sheeted in to give another nudge if there's a lull in the wind.



4 This is the gentlest pick-up yet. With a light breeze and the tide acting as a brake, that's as it should be.





INTELLIGENT MOTION



Welcome to
**SHOGUN
TERRITORY**

The Mitsubishi Shogun goes where other vehicles fear to tread. With its Super Select 4WD system the fearless Shogun turns untamed territory into nothing more than a stroll in the park. And whether you're exploring in the LWB or SWB model, the Mitsubishi Shogun is engineered to conquer the world's toughest landscapes. Luckily, there's a more welcoming environment waiting at your local Mitsubishi dealership when you book a test drive. We call this Intelligent Motion.

SWB from £28,634¹
5 SEATS | 3 TONNE TOWING

LWB from £31,034¹
7 SEATS | 3.5 TONNE TOWING

MITSUBISHI SHOGUN
WITH GREAT FINANCE OPTIONS² & A 5 YEAR WARRANTY³

Explore new territory | Visit mitsubishi-cars.co.uk to find your nearest dealer.

1. Prices shown include VAT (at 20%) and exclude VED and First Registration Fee. Metallic paint extra. On The Road prices range from £29,559 to £40,224 and include VED and First Registration Fee. Prices correct at time of going to print. Shogun SG4 LWB model shown with accessory 20" black/silver wheels fitted - available at extra cost. 2. Finance is through Shogun Finance Ltd T/A Finance Mitsubishi 116 Cockfosters Rd, Barnet, EN4 0DY and is subject to status to customers aged 18 and over. Finance Mitsubishi is part of Lloyds Banking Group. Finance options are only applicable in the UK (excludes Channel Islands & I.O.M) and may be amended or withdrawn at any time. 3. All new Shogun variants come with a 5 year/62,500 mile warranty (whichever occurs first). For more information please visit www.mitsubishi-cars.co.uk/warranty. Fuel figures shown are official EU test figures, to be used as a guide for comparative purposes and may not reflect real driving results.

Shogun range fuel consumption in mpg (ltrs/100km): Urban 26.9 – 27.4 (10.5 – 10.3), Extra Urban 32.8 – 34.0 (9.3 – 9.0), Combined 30.4 – 31.4 (9.3 – 9.0), CO₂ emissions 245 – 238 g/km.

The **PBO** 2016 Marina Price Guide

Your comprehensive guide to 266 coastal marinas around the British Isles. Listings compiled by Laura Hodgetts and Roz Jones

The PBO Marina Price Guide provides comprehensive regional listings of annual berths around England, Scotland, Wales, the Channel Islands, Shetland Islands, Northern Ireland and the Republic of Ireland. Since it began in 2009, the guide has grown from 219 to 266 listings, which enable you to compare and contrast marina charges, as well as the facilities and services offered by each marina.

We only list walk-ashore berths with mast-up access from the coast. In order to compare the prices provided by the hundreds of marinas, with varying pricing structures, we requested the annual berthing costs for yachts of 7m, 10m and 13m LOA, and worked out an average per-metre price. The sums we quote, which include VAT, may not be exact for your particular boat but are intended to be representative overall.

National rankings start at 1 for the most expensive. To help you plan your access, we give the depth of water at the pontoon and in the approaches at Mean Low Water Springs, allowing us to include drying marinas.

What's new?

Marina upgrade works at Scotland's Campbeltown Loch, completed last June, have resulted in the new 54-berth Campbeltown Marina, with an angled concrete breakwater to protect the more northerly berths and new onshore facilities. This represents a huge improvement to the previous facility, which provided alongside berthing for up to 18 vessels or up to 38 when triple-rafting: it was also open to strong easterly winds and had very limited onshore facilities.

The marina at Portavadie has expanded its offering with a spa and leisure experience at its Loch Fyne location. The latest features in the £10million development include



St Peter Port Marina on Guernsey: annual berths are just for island residents

a 16m indoor pool, outdoor spa pools, a Scandinavian sauna, a gymnasium and the largest heated outdoor infinity pool in Scotland.

In Wales, Aberystwyth Marina changed hands in September 2015 and is now run by The Marine Group. On the south-east coast of England, Peter Leonard Marine have announced plans to expand into another boatyard nearby, and are investing in a new slipway on the Denton Island site, which once complete will be able to slip boats up to 50 tons.

Last year, Premier Marinas invested £6million in development projects across its eight South Coast marinas, including a new self-storage facility at Swanwick, and a new dry stack service for RIBs and boats up to 8m (26ft) at Falmouth Marina, while Gosport Marina's dry stack was extended from 80 boats to 148 boats.

Southsea Marina was updated with spa-quality facilities, and Brighton Marina became home to a new £1million floating yacht club and saw the refurbishment of its West Jetty facilities. There was also a £75,000 pile replacement scheme at Swanwick Marina, a pontoon refurbishment at Port Solent and a raft of security and equipment upgrades at Brighton, plus boatyard resurfacing at Eastbourne Boatyard. Plans for 2016 include the building of 19 short-term-let holiday apartments at Chichester Marina, due to be finished in March.

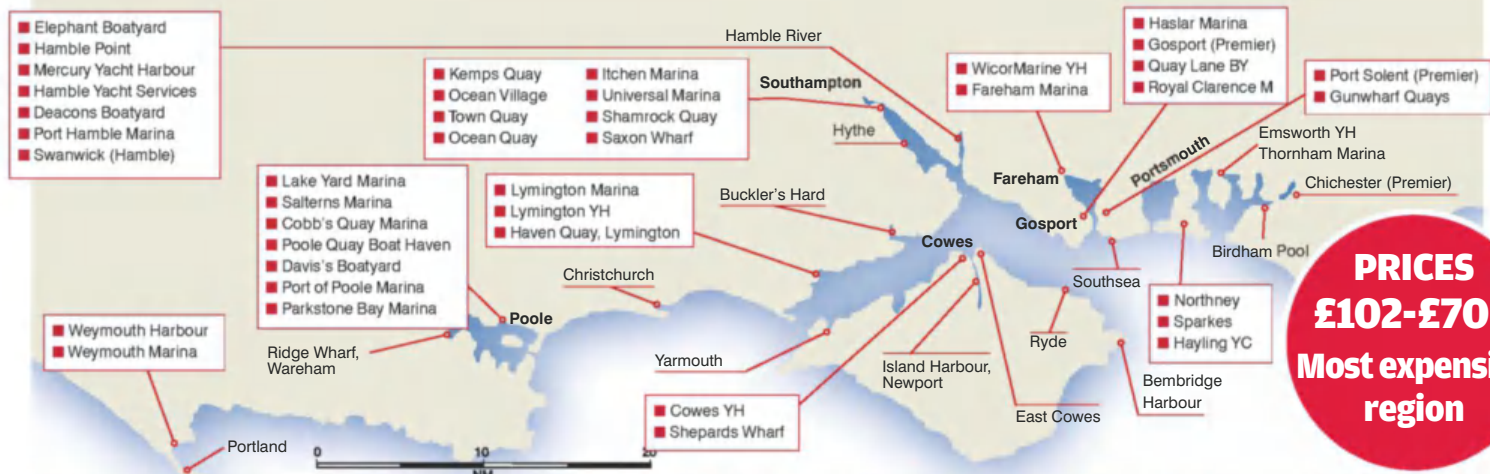
Nineteen new berths have been created at Lymington Yacht Haven, the flagship marina for Yacht Havens Group, to accommodate an increased demand for larger berths. Lymington Yacht Haven has also completed a large dredging operation and has installed a live weather system: it was awarded

UK Coastal Marina of the Year 2016 (over 250 berths) by the Yacht Harbour Association (TYHA).

Now in its third year, the awards were open to all Gold Anchor-accredited marinas both in the UK and overseas, and saw marina customers cast 4,500-plus votes online. Poole Quay Boat Haven was crowned best small marina 'under 250 berths', while Overwater Marina was named UK Inland Marina of the Year 2016.

Increasing numbers of harbours and marinas are joining TYHA's voluntary Gold Anchor scheme, which awards between one and five anchors depending on the standards of facilities and quality of service. Another scheme gaining in momentum is the Royal Yachting Association's (RYA) Active Marina programme, which encourages training, cruising and social opportunities for berth holders.

South Coast and the Isle of Wight



National ranking	Regional ranking	TYHA TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Power	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
73	44	-N	Bembridge Harbour	361.38	Y	350	2.3	0.4	01983 872828	YY	YY	YO	NN	Y<	5
64	40	-Y	Birdham Pool Marina	378.67	N	265	1.9	1	01243 512310	SS	YY	YY	YY	<<	30
14	10	5Y	Buckler's Hard YH	624.00	Y	116	2.5	1	01590 616200	YY	YY	YY	YY	YY	35
43	31	5N	Chichester Marina	460.33	N	1080	2	0.8	01243 512731	YY	YY	YY	YY	YY	65
52	37	-N	Christchurch Marina	423.26	Y	100	1.5	0.4	01202 483250	YY	YY	NO	YN	YY	13
35	27	5N	Cobb's Quay Marina	494.77	N	850	2.5	2.5	01202 674299	YY	YY	YY	YY	YY	25
45	33	-N	Cowes Yacht Haven	455.13	Y	35	3.8	5	01983 299975	YY	YY	YY	<<	YY	30
53	38	-N	Davis's Boatyard	422.19	N	94	>2.5	>2.5	01202 674349	YY	YY	NY	YY	YY	12
22	17	-N	Deacons M & B	551.67	Y	112	2.3	3	02380 402253	YY	YY	NY	<<	<Y	20
54	39	-N	East Cowes Marina	424.00	Y	250	3.5	2	01983 293983	YY	YY	YY	<<	Y<	
32	24	-N	Elephant Boatyard	504.15	N	40	3	3	02380 403268	YY	YN	NN	<<	<<	25
71	42	3N	Emsworth YH	365.00	N	222	<2	0	01243 377727	YY	YY	YY	Y<	YY	50
239	56	-N	Fareham Marina	102.32	Y	50	3	3	079 80007727	YY	NN	NN	<<	N<	
29	22	5N	Gosport Marina	510.92	Y	477	3.5	5	02392 524811	YY	YY	YY	YY	YY	180
27	21	4N	Gunwharf Quays	536.00	Y	55	5.5	5.5	02392 836732	YY	YY	YY	<<	<<	
1	1	5N	Hamble Point Marina	705.89	Y	230	2.5	2.5	02380 632323	YY	YY	YY	<<	<Y	75
9	5	-N	Hamble Yacht Services	656.00	Y	35	4	4	02380 201501	YY	YY	NO	<<	<<	60
34	26	-N	Haslar Marina	495.00	Y	650	6	6	02392 601201	YY	YY	YY	<<	Y<	200
15	11	-N	Haven Quay, Lymington	610.00	N	4	2.2	2	01590 677072	YY	YY	NN	<<	<<	5
33	25	5N	Hythe Marina Village	499.76	N	206	2.5	2.5	02380 207073	YY	YY	YY	YY	YN	40
81	45	-N	Island Harbour Marina	340.00	Y	200	1	1.8	01983 539994	YY	YY	YY	<<	YY	50
83	46	-N	Itchen Marina	336.38	N	80	0	2	02380 631500	YY	YY	NN	Y<	<<	70
193	54	-N	Kemps Quay	174.78	Y	250	2.3	1	02380 632323	YN	YY	NN	<<	<<	8
21	16	-N	Lake Yard	558.77	N	46	2	2	01202 674531	YY	YY	NO	NN	NN	50
16	12	-N	Lymington Marina	593.75	N	285	2.5	3	01590 647405	YY	YY	YY	YY	Y<	75
17	13	5N	Lymington YH	586.79	N	600	3	2.5	01590 677071	YY	YY	YY	YY	YY	50
10	6	5N	Mercury Yacht Harbour	651.43	Y	360	2.5	3	02380 455994	YY	YY	YY	<<	YY	20
20	15	5N	Northney Marina	568.88	N	228	2.5	2.5	02392 466321	YY	YY	YY	YN	Y<	35

National ranking	Regional ranking	TYHA TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
66	41	-N	Ocean Quay Marina	375.00	Y	50	2.5	3	02380 235099	YY	YY	NO	<<	Y<	
23	18	4N	Ocean Village Marina	549.26	N	375	2.5	2.5	02380 229385	YY	YY	YY	<<	Y<	
8	4	-N	Parkstone Bay Marina	660.69	N	50	1	0.5	01202 747857	YY	YY	YY	Y<	<<	47
3	3	5Y	Poole Quay Boat Haven	695.00	N	45	4.5	4.5	01202 649488	YY	YY	YY	<<	<<	
2	2	5N	Port Hamble Marina	705.38	Y	310	2.5	2.5	02380 452741	YY	YY	YY	YY	YY	
19	14	5Y	Port of Poole Marina	575.00	N	75	6	8	01202 649488	YY	YY	YY	<<	<<	
30	23	5N	Port Solent Marina	508.35	N	390	2.5	2.3	02392 210765	YY	YY	YY	YY	YY	40
42	30	5N	Portland Marina	463.00	Y	280	4.5	4.5	01305 866190	YY	YY	YY	YY	YY	50
173	53	-N	Portsmouth M Eng	199.53	Y	130	0	0	01329 232854	YS	YY	NO	NN	N<	10
169	52	-N	Quay Lane Boatyard	202.35	Y	60	0	0	02392 524214	YY	YN	NN	<<	YY	12
106	48	-N	Ridge Wharf YC	295.08	N	122	1.5	1.1	01929 552650	SS	YY	YN	YY	YY	25
46	34	-Y	Royal Clarence Marina	445.33	Y	145	5.2	4.0	02392 523523	YY	YY	YY	<<	<<	
235	55	-N	Ryde Harbour	109.00	Y	100	0	0	01983 613879	YN	YY	YN	<<	<<	
13	9	5N	Salterns Marina	637.16	N	285	2	2	01202 709971	YY	YY	YY	YY	YY	45
26	20	-N	Saxon Wharf	537.77	N	50	2.5	2.5	02380 339490	YY	YY	YY	<<	<<	200
39	28	5N	Shamrock Quay	480.51	N	255	2.5	2.5	02380 229461	YY	YY	YY	<<	Y<	75
50	35	-N	Shepards Wharf	429.10	Y	35	3	3	01983 297821	YY	YY	NY	<<	Y<	6
44	32	5N	Southsea Marina	455.46	N	318	2.5	1.3	02392 822719	YY	YY	YY	YY	YY	25
25	19	4N	Sparkes Marina	542.43	N	140	2.5	2.5	02392 463572	YY	YY	YY	YY	YN	16
11	7	-N	Swanwick Marina	644.46	N	278	2	2	01489 884081	YY	YY	YY	YY	YY	65
130	50	-N	The Hayling Yacht Co	259.26	N	157	2	4	02392 463592	YS	YY	YY	NN	NY	30
114	49	-N	Thornham Marina	285.11	N	81	0.5	0.5	01243 375335	YY	YY	NO	<<	<<	12
51	36	4Y	Town Quay Marina	427.24	Y	130	3.5	9	02380 234397	YY	YY	YY	<<	Y<	
12	8	-Y	Universal Marina	638.60	Y	249	3	>2.5	01489 574272	YY	YY	YY	<<	Y<	75
90	47	-N	Weymouth Harbour	324.17	Y	400	3.5	5	01305 838423	YS	YY	YN	Y<	<Y	
41	29	-N	Weymouth Marina	464.33	Y	300	2	2	01305 767576	YY	YY	YY	<<	<<	
140	51	-N	WicorMarine YH	244.00	Y	25	2.2	>3	01329 237112	SS	YY	NO	Y<	YY	12
72	43	-N	Yarmouth Harbour	363.15	Y	50	2	2	01983 760321	SS	YY	YY	YY	Y<	5

This year, Hamble Point Marina topped the PBO Price Guide as the 'most expensive' marina. A spokesman said: 'For sheer location alone, Hamble Point Marina is hard to beat. Situated right at the mouth of the River Hamble, with easy access to the world-famous waters of the Solent,

the marina is a magnet for competitive sailors from around the globe.' Hamble Point is part of MDL Marinas, which has more than 100 marinas in its cruising network.

Contrastingly, the Shetland Islands are again ranked cheapest region, due to their unique annual berthing system where berths are

reserved for years by local residents who pay a refundable deposit and then smaller annual maintenance costs. Annual berths at St Peter Port, Guernsey are also just for island residents.

We're delighted to welcome Insworke Mill Quay Harbour to our annual guide for the first time.

If your marina meets our criteria but is not listed, please get in touch.

Details submitted by each marina were accurate at the time of going to press. A few marinas were anticipating tariff changes for the new financial year.

■ Visit www.pbo.co.uk/marina-guide for additional information.

PRICE TABLE NOTES Rates are for the 2016 season; Prices are the average per metre (based on prices for 7m, 10m and 13m yachts); all prices include VAT where applicable. Republic of Ireland prices are ranked based on a conversion rate of £1 = €1.2, but listed in euros.; Y = yes, S = some berths, N = no; Wi-Fi: Y = at berth, O = onsite, N = no; For services: < = within a mile; Drying heights represented by 0; For depths: > = greater than, < = less than; Where the approach depth is considerably less than the berth depth, it may be the marina has a sill or lock – please check with the marina operator. TYHA: - denotes not rated.



National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
98	6	-N	Aberystwyth Marina	310.27	Y	168	2.2	0.4	01970 611422	YY	YY	Y0	Y<	YY	11
137	9	-N	Cardiff Marina	250.00	Y	350	3	1.8	02920 396078	YY	YY	Y0	Y<	<<	20
58	2	5Y	Conwy Quays Marina	399.26	Y	500	2.5	0.5	01492 593000	YY	YY	YY	YY	YY	30
49	1	5Y	Deganwy Quays	430.46	Y	170	2.5	0.5	01492 576888	YY	YY	YY	YY	<<	20
70	3	-N	Hafan Pwllheli	365.71	Y	420	2.5	0.6	01758 701219	YY	YY	YY	YY	YY	50
95	5	-N	Holyhead Marina	318.00	Y	350	<4.5	>3.5	01407 764242	YY	YY	Y0	YY	YY	15
139	10	4N	Milford Marina	246.00	Y	328	>7	1.1	01646 696312	YY	YY	YY	YN	YY	12
91	4	-Y	Neyland YH (Lower)	321.75	Y	420	2	2	01646 601601	YY	YY	YY	YY	YY	35
150	12	-Y	Neyland YH (Upper)	229.12	Y	420	2	2	01646 601601	YY	YY	YY	YY	YY	35
102	7	5Y	Penarth Quays Marina	301.76	Y	320	3.3	2	02920 705021	YY	YY	YY	YY	YY	20
103	8	-N	Port Dinorwic	300.00	Y	140	2	0	01248 671500	YY	YY	YY	YN	YN	15
163	13	-N	Swansea Marina	206.43	Y	550	3	3	01792 470310	SS	YY	YY	YN	YY	20
147	11	-N	Victoria Dock	234.23	Y	100	2.2	0	01286 672346	YY	YY	Y0	<<	<Y	10

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Power	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
209	26	-N	Bristol Harbour	153.00	Y	400	5.5	0	01179 031484	SS	YY	NN	<N	N<	12
138	20	-N	Bristol Marina	246.55	N	85	3	3	01179 213198	YY	YY	YY	Y<	YY	50
48	10	5N	Brixham Marina	432.67	Y	485	2.5	2.5	01803 882929	YY	YY	YY	YN	Y<	50
224	29	-N	Dart Harbour & N A	134.62	N	100	>5	>7	01803 832337	SS	YY	NY	YY	<<	35
4	1	-Y	Dart Marina Yacht H	689.20	N	110	2	1.5	01803 837161	YY	YY	YY	<<	Y<	
24	3	-N	Darhaven Marina	544.80	N	270	3	3	01803 752242	YY	YY	YY	<<	Y<	35
112	18	-N	Dolphin Haven	290.45	N	30	1.3	5	01803 842424	SS	YY	NO	<<	<Y	10
38	7	-N	Exmouth Marina	481.14	Y	211	1.5	1	01395 269314	YY	YY	NN	YN	NY	15
18	2	-N	Falmouth Haven	582.86	N	100	1.5	1	01326 310990	YS	YY	YY	YY	<<	
47	9	4N	Falmouth, Inner	445.27	N	320	1.5	0	01326 316620	YY	YY	YY	Y<	YY	30
31	5	4N	Falmouth, Outer	505.40	N	320	2	1.8	01326 316620	YY	YY	YY	Y<	YY	30
220	28	-N	Insworke Mill Quay	138.68	Y	8	0	0	07967 645205	YY	YY	Y0	NN	<<	
62	14	-N	King Point Marina	390.00	Y	81	2.5	2.5	01752 424297	YY	YY	YY	<<	W	
188	25	-N	Malpas Marine	178.57	Y	28	0	0.5	01872 271260	SS	YY	NN	NN	YY	3.9
67	15	5Y	Mayflower Marina	370.00	Y	396	5	6	01752 556633	YY	YY	YY	YY	YY	33
219	27	-N	Multihull Centre	139.03	Y	30	0	0	01752 823900	SS	YY	YN	NN	YY	25
28	4	-Y	Mylor Yacht Harbour	528.00	Y	180	2	2	01326 372121	YY	YY	YY	YY	YY	35
59	12	-N	Noss Marina	395.05	N	180	4	4	01803 839087	YY	YY	YY	<<	YN	10
60	13	5N	Plymouth Y H	394.89	Y	450	>2.2	>2.2	01752 404231	YY	YY	YY	Y<	YY	75
40	8	-N	Port Pendenis	480.00	Y	160	4.5	3.5	01326 211211	YY	YY	YY	<<	Y<	40
109	17	5Y	Portishead Quays	292.01	Y	280	7	0	01275 841941	YY	YY	YY	YY	YY	35
55	11	5N	Queen Anne's Battery	416.42	N	235	2.5	2.5	01752 671142	YY	YY	YY	YY	YY	40
236	31	-N	Sharpness Marina	108.41	Y	180	<3.5	<3.5	01453 811476	YY	YY	YN	<<	YY	30
164	24	-N	Southdown Marina	205.78	Y	100	0	1.8	07815 005474	YY	YY	YY	<N	<<	25
122	19	5N	Sutton Harbour	269.00	Y	489	3.5	2	01752 204702	YY	YY	YY	Y<	Y<	
96	16	-N	Torpoint Y Harbour	317.90	Y	67	2	2	01752 813658	YY	YY	YY	<<	<<	40
36	6	5N	Torquay Marina	489.93	Y	440	2.5	2.5	01803 200210	YY	YY	YY	<<	<<	
142	21	-N	Torquay Town Dock	241.85	Y	192	3.8	5.5	01803 292429	SS	YY	NY	YY	YY	10
162	23	-N	Trouts Boatyard	207.00	N	44	0.5	1	01392 873044	YY	YY	NY	Y<	YY	7
234	30	-N	Uphill Marine Centre	113.16	Y	30	0	0	01934 418617	SS	YY	NN	NN	YN	5
143	22	-N	Watchet Harbour	240.30	Y	180	2.5	0	01984 631264	YS	YY	Y0	YN	YY	25
234	32	-N	Uphill Boat Centre	113.16	Y	30	0	0	01934 418617	SS	YY	NN	NN	YN	5

The South West

**PRICES
£689-£108
3rd dearest
region**





Yacht Havens



the perfect home for your boat



9 Prime Marina Locations.. *with the most helpful staff*

Whether you're looking for an annual berth, a safe winter haven or a visitor berth in a new cruising area, you'll find first-rate facilities and a warm welcome from our friendly, experienced team at whichever Yacht Havens location you choose.

Attractive berthing rates and flexible contracts to save you money, superb modern facilities for your enjoyment, free Wi-Fi at every berth for your convenience, and the freedom to exchange berths with other Yacht Havens.

We can provide you with the best boating experience across the UK, and now the Netherlands. Just ask us what we can do for you.

1 Largs Yacht Haven
Largs, Ayrshire
Tel: 01475 675333

2 Troon Yacht Haven
Troon, Ayrshire
Tel: 01292 315553

3 Neyland Yacht Haven
Neyland, Pembrokeshire
Tel: 01646 601601

4 Fambridge Yacht Haven
River Crouch, Essex
Tel: 01621 740370

5 Lymington Yacht Haven
Lymington, Hampshire
Tel: 01590 677071

6 Haven Quay
Lymington, Hampshire
Tel: 01590 677072

7 Plymouth Yacht Haven
Plymouth, Devon
Tel: 01752 404231

8 Yacht Haven Quay
Plymouth, Devon
Tel: 01752 481190

9 Jachthaven Biesbosch
Drimmelen, Netherlands
Tel: +31(0)162 68 22 49



The North East

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
128	3	-N	Amble Marina	260.00	Y	260	2.5	0	01665 712168	YY	YY	YY	Y<	YY	50
216	9	-N	Bridlington Harbour	144.00	Y	66	0	0	01262 670148	SS	YY	NO	Y<	<Y	75
132	4	-N	Hartlepool Marina	258.53	Y	500	5	0.8	01429 865744	YY	YY	YO	Y<	Y<	40
134	5	4Y	Hull Marina	255.00	Y	249	4	1	01482 609960	YY	YY	YO	YN	YY	50
127	2	4Y	Royal Quays Marina	260.81	Y	350	6	3.5	01912 728282	YY	YY	YY	YY	YN	40
148	6	-N	Scarborough Harbour	232.12	Y	50	2	1.9	01723 373530	YY	YY	YY	Y<	<<	4
221	10	-N	South Ferriby Marina	136.38	N	18	2	2	01652 635620	SS	YY	NN	YN	YY	20
178	8	-N	St Peters Marina	192.00	Y	150	3	3	01912 654472	YY	YY	YY	<<	Y<	3
126	1	-N	Sunderland Marina	264.20	N	132	2	2	01915 144721	YS	YY	NN	Y<	NN	
166	7	-N	Whitby Marina	204.65	Y	228	2	2.4	01947 600165	YY	YY	YY	Y<	<Y	15

Amble
Royal Quays
St Peters
Sunderland
Hartlepool
Whitby
Scarborough
Bridlington
Hull
South Ferriby



Scarborough Harbour

PRICES
£136-£264
6th cheapest
region

0 10 20
NM

Glasson
Basin Marina



The North West



PRICES
£136-£332
5th cheapest
region

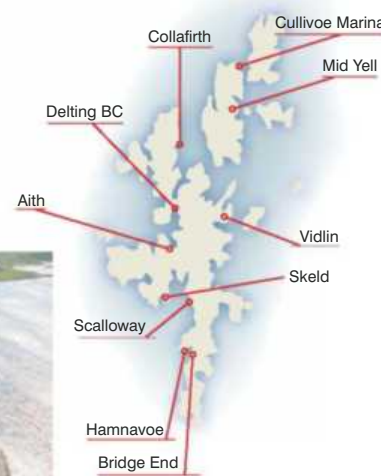
0 10 20
NM

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
206	9	-N	Douglas Marina	162.18	Y	130	2.5	0	01624 687543	SS	YY	NO	<<	<Y	12
222	10	-N	Douglas Marina	136.00	Y	50	1.8	0	01772 812462	SN	YY	NN	<<	<Y	20
144	3	4Y	Fleetwood Haven	237.87	N	340	3	1.5	01253 879062	YY	YY	YN	YN	YN	75
183	7	4N	Glasson Basin Marina	186.00	N	170	3	0	01524 751491	YY	YY	YN	YN	YY	50
86	1	-Y	Liverpool Marina	331.65	Y	340	4	2.5	0151 7076777	SS	YY	YO	Y<	<Y	60
174	5	3N	Maryport Marina	193.76	Y	190	5.6	0	01900 814431	YY	YY	Y	Y<	YN	25
195	8	-N	Peel Marina	173.81	Y	120	2.5	0	01624 686612	YY	YY	NO	Y<	<N	12
182	6	-N	Preston Marina	189.00	Y	125	4	0	01772 733595	YY	YY	YY	Y<	YY	12
134	2	-Y	Whitehaven Queens	255.00	Y	220	7	0	01946 692435	YY	YY	YY	Y<	YN	45
161	4	-Y	Whitehaven West	207.73	Y	180	7	0	01946 692435	YY	YY	YO	Y<	YN	45

Shetland Islands

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
258	1	-N	Aith Marina	43.05	Y	38	2.4	1.2	01595 810378	YY	YY	NN	YN	YN	8
264	7	-N	Bridge End, South Voe	15.99	N	24	4	4	01595 859332	YY	YY	NN	YY	NN	
259	2	-N	Collafirth Marina	40.00	Y	9	1.8	8	01806 533288	YN	YY	YN	NN	NN	
263	6	-N	Cullivoe Marina	17.14	Y	13	1.3	1.2	01957 744262	NN	NN	NN	<<	<N	
261	4	-N	Delting Boating Club	20.59	Y	2	2	2	01806 522524	YY	YY	YO	Y<	<<	5
266	9	-N	Hamnavoe Marina	12.79	N	50	3	4	01595 881253	YY	YN	NN	<<	NN	
267	10	-N	Mid Yell Marina	10.66	Y	36	1.9	2	01957 702317	YY	NN	NN	<<	NN	
262	5	-N	Scalloway	18.39	Y	20	7	8.7	01595 744221	SS	YY	NO	YN	N<	250
265	8	-N	Skeld Marina	13.86	Y	53	2.5	2.5	01595 860287	YY	YY	YY	Y<	<N	12
260	3	-N	Vidlin Marina	21.32	N	43	1.7	1.7	01806 577326	YY	YN	NN	NN	NN	

PRICES
£11-£43
Cheapest
region



Delting Boating Club Marina

0 10 20
NM



**UPGRADE TO A PREMIER MARINA.
YOU'LL LOVE THE DIFFERENCE.**

The best thing about Premier Marinas is its welcoming staff and superb customer service. But we know you want it all, so we continue to invest in making your time with us perfect - from luxury facilities to new boatyards, self-serve fuelling, new restaurants and more. But don't just take our word for it, call now for a free trial night and find out for yourself why over 90% of our customers think we are good or excellent.



Scotland (including the Orkneys)

PRICES
£62-£386
3rd cheapest
region

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
254	40	-N	Anstruther Harbour	62.20	Y	102	0	0	01333 310836	SY	YY	NN	NN	<N	
231	28	-N	Arbroath Harbour	126.00	Y	53	2.5	1	01241 872166	YY	YY	YN	Y<	<N	120
88	5	-N	Ardfern Yacht Centre	330.00	Y	90	5	5	01852 500247	YY	YY	YY	YN	YY	40
217	25	-N	Banff Harbour Marina	143.44	Y	74	1.8	0.8	01261 815544	YY	YY	YN	<<	<<	
191	22	-N	Caley Marina	175.00	N	70	2.4	2.4	01463 233437	YY	YY	NY	Y<	<Y	17
230	27	-N	Campbeltown Marina	130.00	Y	30	3	4	07798 524821	YY	YY	YN	Y<	Y<	10
107	10	-N	Clyde Marina	294.33	Y	280	4.5	10	01294 607077	YY	YY	YY	Y<	Y<	50
93	6	-N	Craobh Marina	320.00	N	>250	15	3.5	01852 500222	YY	YY	YY	Y<	YY	30
176	17	-N	Crinan Canal	192.79	N	35	2.4	2.4	01546 603210	SS	YY	NO	NN	<<	
74	3	5N	Dunstaffnage Marina	355.00	Y	250	5	5	01631 566555	YY	YY	YO	Y<	YY	40
180	18	-N	Eyemouth Harbour	191.24	Y	40	1.2	2.4	01890 752494	YY	YY	YY	Y<	<Y	
246	36	-N	Gairloch Harbour	91.63	Y	20	3.5	10	01445 712140	SS	YY	NN	Y<	<N	
251	39	-N	Helmsdale Harbour	83.74	Y	30	1	1	01431 821692	SS	YY	NN	YN	<N	
111	11	-N	Holy Loch Marina	291.01	Y	250	6	20	01369 701800	YY	YY	YY	Y<	Y<	23
165	15	4N	Inverness Marina	205.00	Y	150	3	3	01463 220501	YY	YY	YO	Y<	<<	45
124	12	-N	James Watt Dock	266.05	Y	130	5.1	8	01475 729838	YY	YY	YY	YY	Y<	12
244	34	-N	Kinlochbervie Harbour	96.67	Y	30	4	7	01971 521235	SS	YY	YO	Y<	<Y	0.5
69	2	-N	Kip Marina	366.17	Y	600	3.4	3.5	01475 521485	YY	YY	YY	Y<	YY	50
248	38	-N	Kirkcudbright	89.97	Y	30	3.5	0	01557 331135	YY	YY	YN	<<	<<	
186	20	-N	Kirkwall Marina	180.00	Y	95	3	5	01856 871313	YY	YY	NY	Y<	<<	
63	1	5N	Largs Yacht Haven	386.29	Y	730	3	3	01475 675333	YY	YY	YY	Y<	YY	70
246	36	-N	Lochinver Harbour	91.63	Y	30	5	8	01571 844265	YY	YY	YY	Y<	<Y	25
202	23	-N	Lossiemouth Marina	166.80	Y	102	1.5	1.8	01343 813066	YY	YY	YY	<<	<N	20
245	35	-N	Nairn Harbour	95.92	Y	84	0.5	0.5	01667 456008	SS	YY	NN	YY	YN	
99	8	-N	Oban Marina & YS	307.13	Y	115	>10	>10	01631 565333	YY	YY	YO	YN	YY	50
238	30	-N	Peterhead Bay Marina	103.20	Y	150	2.4	2.3	01779 477868	YY	YY	YO	Y<	YN	7
149	14	-N	Port Bannatyne Marina	231.67	Y	108	2.5	2.5	01700 503116	YY	YY	YY	NN	YY	15
105	9	4N	Port Edgar Marina	295.80	Y	300	2	2	01313 313330	YY	YY	YY	Y<	YY	25
131	13	5N	Portavadie Marina	259.15	Y	230	12	>20	01700 811075	YY	YY	YY	YY	YY	12
82	4	-Y	Rhu Marina	336.68	Y	210	12	12	01436 820238	YY	YY	YY	YN	YY	35
167	16	-N	Sandpoint Marina	204.00	Y	30	1.5	2	01389 762396	YY	YY	NN	Y<	<N	40
183	19	-N	Seaport Marina	186.00	Y	80	4.1	1.4	01463 725500	YY	YY	YO	Y<	<<	10
207	24	-N	Stornoway Marina	155.14	Y	80	3	3	01851 702688	YY	YY	YY	Y<	<Y	25
240	31	-N	Stranraer Harbour	102.00	Y	70	3	2.7	01776 706565	YY	YY	YN	<<	<N	
242	32	-N	Stromness Marina	100.00	Y	72	3	5	01856 871313	YY	YY	YY	Y<	<<	
187	21	-N	Tarbert Harbour	178.91	Y	200	8	8	01880 820344	YY	YY	YY	YY	YY	12
94	7	4Y	Troon Yacht Haven	318.67	Y	400	3	2.7	01292 315553	YY	YY	YY	Y<	YY	55
242	32	-N	Westray Marina	100.00	Y	17	3	5	01856 871313	YY	YY	NO	<<	<N	
225	26	1N	Whitehills	134.39	Y	47	1.5	1.5	01261 861291	YY	YY	YY	Y<	Y<	10
232	29	-N	Wick Marina	123.60	N	72	2.3	2.3	01955 602030	YY	YY	YO	Y<	<Y	30



Channel Islands

PRICES
£194-£411
2nd dearest
region

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WiFi	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
56	1	-Y	Beaucette Marina	411.33	Y	100	9	0	01481 245000	YY	YY	YY	Y<	Y<	18
75	4	5N	Elizabeth Marina	353.79	Y	567	4	0	01534 447708	YY	YY	YY	YY	<<	65
57	2	5N	La Collette Marina	401.81	Y	98	3	2	01534 447708	YY	YY	YY	YY	<<	65
68	3	5N	St Helier Marina	367.18	Y	142	3	2	01534 447708	YY	YY	YY	YY	YY	65
175	5	-N	St Peter Port Marina	193.61	Y	1200	1.8	2	01481 720229	SS	YY	YY	YY	YY	40



FLEXIBLE BERTHING PLANS*

Enjoy 2 for 1 berthing at Birdham Pool and Royal Clarence Marinas with an annual berthing contract

FREE LIFT OUT AND SCRUB*

Plus 6 months storage ashore for annual berth holders at Birdham Pool Marina

2016 BERTHING PACKAGE*

Phone us to find out how much you could save on mooring fees with an annual berthing contract

ARE YOUR BOAT AND CREW READY FOR THE SEASON?

We are - and we're looking forward to seeing you!

www.castlemarinas.co.uk

*T&Cs apply. Offer subject to availability



BREATHE NEW LIFE INTO YOUR BOAT COVER

RENOVO BOAT CANVAS CLEANER



As recommended by PBO Magazine.
"The hood came up almost like new, I was very pleased with the result"



RENOVO ULTRA PROOFER

Re-establishes the original "as new". Waterproof weather barrier. PBO "After the hood had dried, any water splashed on it gathered in globules and ran off it; just like a newly polished car!"
"thoroughly recommended"

RENOVO PLASTIC WINDOW POLISH

Restores transparency and removes cloudiness.



RENOVO BOAT CANVAS REVIVER

available in dark blue, will re-colour and re-condition canvas fabric to look like new.



RENOVO BOAT VINYL CLEANER

Removes those stubborn deposits of everyday grime, salt, sap and bird dirt thus refreshing the appearance and helping preserve the condition of vinyl.

RENOVO BOAT VINYL ULTRA PROOFER

Protects and conditions vinyl against stains; also includes a UV SPFactor in its formulation.

www.renovomarine.com
CREDIT CARD HOTLINE 01444 443277

All product P&P prices are available on the website

Beaulieu events

Boatjumble

Sunday 24 April 2016

UNWANTED BOATING GEAR? WHY NOT SELL IT AT TRUNK TRADERS?
Call 01590 614614 for more info



Ask The Experts LIVE
with sponsors
Practical Boat Owner

Boatjumble Hundreds of stands selling boating bits
Boatmall Equipment, accessories, clothing and services
Boatmart Used craft from classics to nearly new
Trunk Traders For budding jumblers

More than just a Boatjumble!



Entry includes all Beaulieu attractions:
National Motor Museum, Palace House & Gardens, Beaulieu Abbey and World of Top Gear

beaulieubojumble.co.uk 01590 612888



The East Coast

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WIFI	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
250	31	-N	Bells Dyke	87.60	Y	50	1	2	01603 713109	NN	NN	NN	<<	<<	25
185	22	-N	Bells Marina	182.90	Y	75	1.5	2	01603 713109	YY	YN	NO	<<	<<	25
155	17	-N	Blackwater Marina	218.33	Y	196	0	0	01621 740264	YY	YY	NO	Y<	YN	18
233	30	-N	Boston Gateway	119.63	N	49	1.5	0	07480 525230	YY	YY	NN	<<	<N	
115	9	-N	Bradwell Marina	283.59	N	350	2.5	0.3	01621 776235	YS	YY	YY	YY	YN	45
190	23	-N	Bridgemarsh Marina	177.16	N	192	0	0	01621 740414	SS	YY	NN	<<	YN	10
178	21	-N	Broom Boats Marina	192.00	Y	100	2	3	01603 712334	YY	YY	YY	YY	Y<	35
159	20	4Y	Brundall Bay Marina	212.33	Y	329	1	2	01603 717804	YS	YY	YY	NN	YY	22
203	25	-N	Burgh Castle Marina	165.00	N	75	1	0	01493 780331	YY	YY	YN	<<	NN	
77	2	-N	Burnham YH	348.76	N	350	2.5	3	01621 782150	YY	YY	YY	Y<	YY	30
118	10	-N	Debbage Marina	273.94	Y	60	0.5	1	01473 601169	YS	YY	YO	<<	<Y	10
153	16	-N	Eastwood Marina	221.63	N	10	0.9	0.9	01603 781178	YY	YY	YO	<<	<N	30
120	12	-N	Essex Marina	272.26	N	450	2	>5	01702 258531	YY	YY	YY	YY	YY	70
223	28	-N	Fosdyke Yacht Haven	135.00	Y	50	1.8	0.6	01205 260240	YS	YY	NN	NN	NY	50
101	7	-Y	Fox's Marina Ipswich	303.99	N	70	2	2	01473 689111	YY	YY	NO	Y<	YY	65
196	24	-N	Heybridge Lock	173.70	Y	150	0	0	07712 079764	SS	YY	YN	NN	NN	18
80	4	5N	Ipswich Haven Marina	342.20	N	320	6.4	5.6	01473 236644	YY	YY	YO	Y<	YY	70
136	14	4Y	Lowestoft Hamilton Dk	252.00	Y	46	3	4	01502 580300	YY	YY	YO	<<	<<	
146	15	4Y	Lowestoft, School Rd	234.77	Y	140	4	3	01502 580300	YY	YY	YO	Y<	Y<	70
83	5	-N	Neptune Marina	336.38	Y	150	7.5	5.2	01473 215204	YY	YY	NY	YN	YN	15
78	3	-N	Shotley Marina	345.00	Y	350	2.5	2.4	01473 788982	YY	YY	YO	YN	YY	40
156	18	-N	St Olaves Marina	215.00	N	200	1.1	1.4	01493 488500	YY	YY	NN	NN	N<	50
85	6	-N	Suffolk Yacht Harbour	336.30	Y	550	2	2	01473 659465	YY	YY	YY	YY	YY	75
128	13	4N	Tidemill Yacht Harbour	260.00	Y	200	2.5	0.5	01394 385745	YY	YY	YO	YN	YY	35
110	8	-N	Titchmarsh Marina	291.06	Y	420	2	1.3	01255 672185	YY	YY	YO	YN	YY	35
119	11	4Y	Tollesbury Marina	273.64	Y	250	2	0	01621 869202	YY	YY	YY	YN	YY	20
215	27	-N	Tollesbury Saltings Ltd	145.00	N	90	0	0	07521 318155	SS	YY	NN	<<	<<	10
203	25	-N	Walton Yacht Basin	165.00	Y	40	1.8	0	01255 675873	YY	YY	NO	NN	NY	14
156	18	5N	Waveney River Centre	215.00	Y	120	1.5	2	01502 677343	YY	YY	YO	YY	YY	35
229	29	-N	Wisbech YH	131.24	N	128	2	0.5	01945 588059	YY	YY	YN	Y<	<N	75
61	1	5N	Woolverstone Marina	390.35	N	235	2.5	2.5	01473 780206	YY	YY	YY	YN	YY	10



PRICES
£82-£688
8th cheapest region

South East



National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WIFI	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
65	5	5N	Brighton Marina	376.37	N	1536	2	0.5	01273 819919	YY	YY	YY	YY	YY	60
89	7	5N	Chatham Maritime	324.70	N	412	2.5	2.5	01634 899200	YY	YY	YY	YY	Y<	16
201	24	-N	Conyer Creek Marina	168.76	N	20	0	0	01795 521711	YY	YY	NO	<N	<N	8
108	11	5Y	Dover, Granville Dock	292.29	Y	136	2.5	2.5	01304 241663	YY	YY	YO	Y<	<<	50
100	9	5Y	Dover, Tidal Harbour	306.95	Y	106	2.5	2.5	01304 241663	YY	YY	YO	Y<	<<	50
145	16	5Y	Dover, Wellington Dock	236.00	Y	157	3	2.5	01304 241663	YY	YY	YO	Y<	<<	50
79	6	5N	Eastbourne Marina	344.08	Y	830	2.5	2	01323 470099	YY	YY	YY	YY	YY	50
154	18	-N	Gallions Point Marina	218.93	N	120	3	0	02074 767054	YY	YY	NO	<<	YN	2.5
97	8	-Y	Fambridge YH	314.29	N	250	1.5	1	01621 740370	YY	YY	YY	YY	YY	25
104	10	5Y	Gillingham Marina	298.00	N	480	2.4	3.2	01634 280022	YY	YY	YY	Y	YY	65
168	19	-N	Highway Marina	202.80	N	90	1.5	0.5	01304 613925	YY	YN	NN	<<	YY	10
123	14	-N	Lady Bee Marina	268.37	Y	80	2.5	1.8	01273 596680	YY	YY	NY	<<	YY	25
5	1	3N	Limehouse Basin	687.53	Y	90	2.4	0.5	02073 089930	YY	YY	YY	<<	<<	
252	28	-N	Meeching Boats	82.19	N	80	0	0	01273 514907	NN	NN	NN	<<	<<	
113	12	-N	Newhaven Marina	288.00	Y	285	0	4.5	01273 513881	YY	YY	NN	Y<	<Y	12
205	25	-N	Peter Leonard Marine	164.10	Y	30	0	0	01273 515987	SS	YY	YN	<N	YY	12
5	1	3N	Poplar Dock Marina	687.53	Y	89	12	1	02073 089930	YY	YY	YO	YN	<N	
172	22	-N	Port Medway Marina	199.81	Y	300	3	5	01634 720033	YY	YY	YN	<<	YN	25
141	15	-N	Port Werburgh	242.82	Y	150	0	0	01634 252107	YY	YY	NN	NN	NN	15
116	13	4N	Ramsgate	275.40	Y	700	3.1	3.1	01843 572100	YY	YY	YO	YY	<Y	40
212	26	-N	Sandwich Marina	148.02	N	50	1.5	0	07974 754558	SS	YY	NN	<<	Y<	20
37	4	-N	South Dock Marina	482.68	Y	200	3	0	02072 522244	YY	YY	YN	<<	<<	17
7	3	-N	St Katharine Docks	662.33	Y	180	5	5	02072 645312	YY	YY	YO	<<	NN	
218	27	-N	Strand Quay	142.03	Y	20	0	0	01797 225225	YY	YY	NN	<<	<N	
171	21	-N	Swale Marina	201.55	N	190	0	0	01795 521562	YY	YY	NN	YN	YN	30
170	20	-N	The Embankment	201.60	Y	30	2	0	01474 535700	SS	YY	NO	Y<	YN	
151	17	-N	Victory Marina	227.80	N	30	5	5	07785 971797	YY	YN	NO	<<	<<	
194	23	-N	Youngboats	174.19	N	100	0	0	01795 536176	YY	YY	NN	NN	NY	10

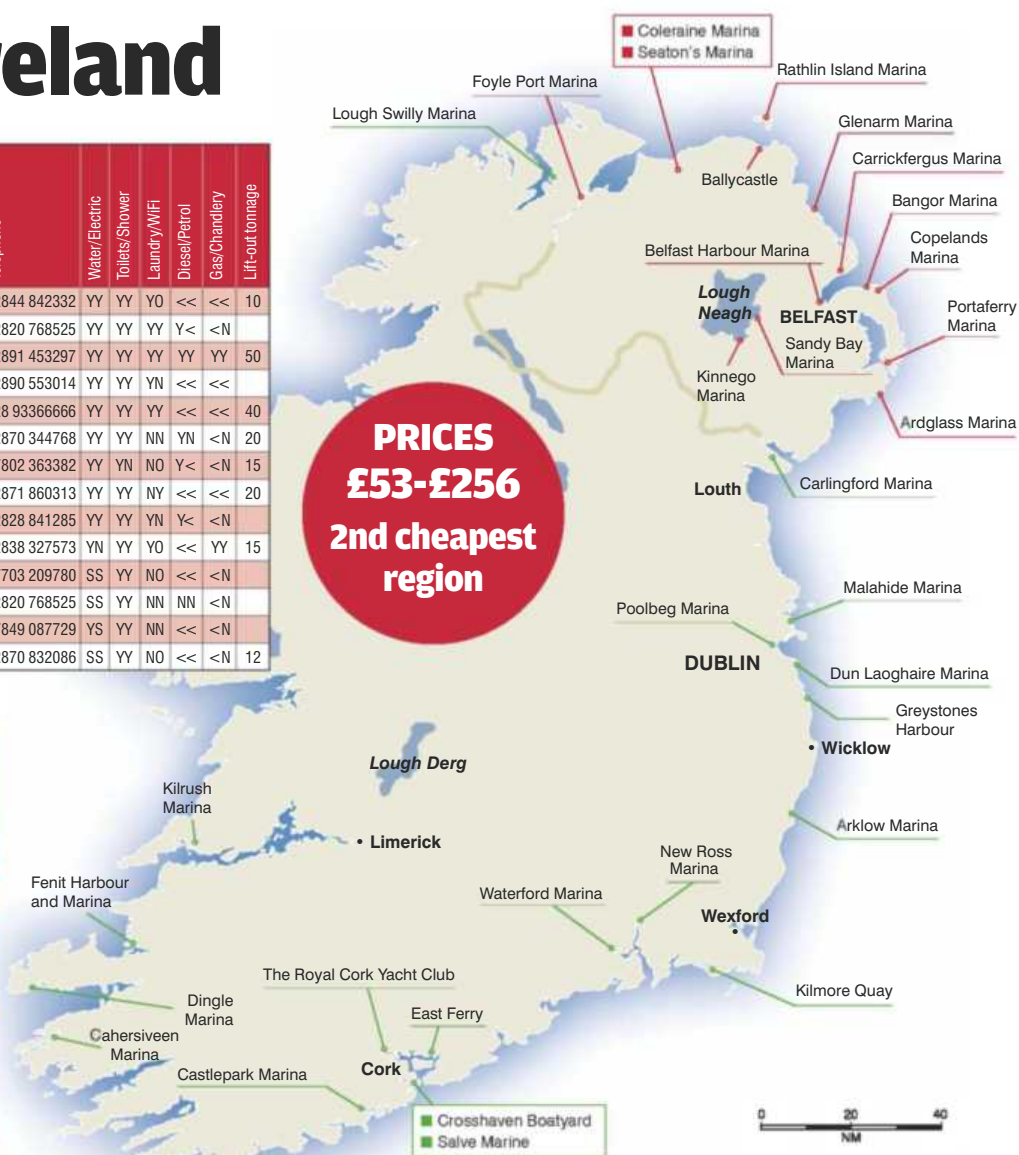
Northern Ireland

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (£)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WIFI	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
214	8	-N	Ardglass Marina	145.20	Y	20	2.5	2.6	02844 842332	YY	YY	YO	<<	<<	10
197	5	-N	Ballycastle Marina	171.00	Y	74	2.4	2.8	02820 768525	YY	YY	YY	Y<	<N	
133	1	5Y	Bangor Marina	256.43	Y	530	3	4	02891 453297	YY	YY	YY	YY	YY	50
158	3	-N	Belfast Harbour Marina	213.87	Y	55	4	5.5	02890 553014	YY	YY	YN	<<	<<	
152	2	5N	Carrickfergus Marina	227.00	Y	316	2.3	2.3	028 93366666	YY	YY	YY	<<	<<	40
189	4	-N	Coleraine Marina	177.65	N	76	3	3	02870 344768	YY	YY	NN	YN	<N	20
211	7	-N	Copelands Marina	148.29	Y	50	0	0	07802 363382	YY	YN	NO	Y<	<N	15
249	11	-N	Foyle Port Marina	87.73	Y	60	5	6	02871 860313	YY	YY	NY	<<	<<	20
198	6	-N	Glenarm Marina	170.00	Y	48	3	6	02828 841285	YY	YY	YN	Y<	<N	
255	12	-N	Kinnego Marina	61.82	Y	190	2	3	02838 327573	YN	YY	YO	<<	YY	15
237	10	-N	Portaferry Marina	105.00	Y	40	2.5	2	07703 209780	SS	YY	NO	<<	<N	
256	13	-N	Rathlin Island Marina	57.00	Y	40	2.4	2.8	02820 768525	SS	YY	NN	NN	<N	
257	14	-N	Sandy Bay Marina	53.30	N	60	2	2	07849 087729	YS	YY	NN	<<	<N	
226	9	-N	Seaton's Marina	134.00	Y	45	2.5	3.5	02870 832086	SS	YY	NO	<<	<N	12

PRICES
£53-£256
2nd cheapest
region



Carrickfergus Marina can be found on the north shore of Belfast Lough



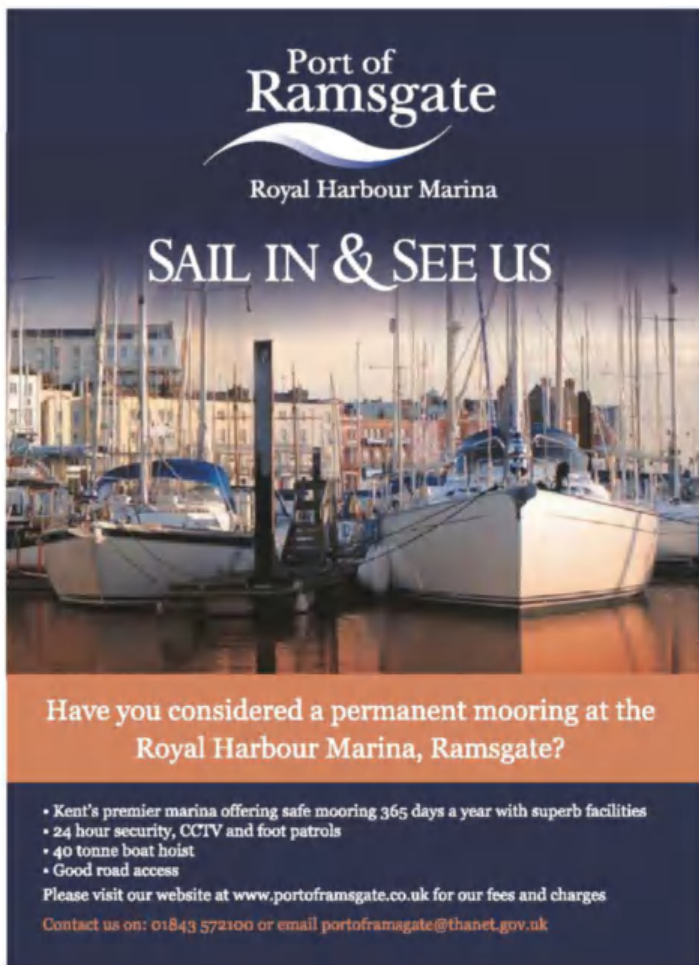
Republic of Ireland

PRICES
€95-€424
4th cheapest
region



Waterford Marina is the Republic of Ireland's cheapest marina

National ranking	Regional ranking	TYHA/TransEurope	Marina name	Annual average price per metre (€)	Harbour dues	Number of berths	Maximum berth depth (m) at MLWS	Depth (m) in the approaches at MLWS	Telephone	Water/Electric	Toilets/Shower	Laundry/WIFI	Diesel/Petrol	Gas/Chandlery	Lift-out tonnage
121	5	-N	Arklow Marina	323.33	Y	70	2.8	2.5	+353 872 375189	YY	YY	YO	<<	<<	40
228	17	-N	Cahersiveen Marina	160.00	Y	93	2.6	3	+353 669 472777	YY	YY	YO	<<	<<	
181	9	-N	Carlingford Marina	227.90	Y	180	2	1.8	+353 429 373072	YY	YY	YO	YN	NY	50
125	6	4Y	Castlepark Marina	317.29	N	150	13	10	+353 214 774959	YY	YY	YY	Y<	<<	
200	12	-N	Crosshaven Boatyard	203.58	N	80	4.5	3.3	+353 214 831161	SS	YY	NY	YN	<N	40
210	14	-N	Dingle Marina	180.00	Y	120	5	2.6	+353 669 151629	YY	YY	YY	Y<	YY	
76	1	5N	Dun Laoghaire Marina	423.85	Y	700	4	4	+353 120 20040	YY	YY	YY	YY	Y<	50
227	16	-N	East Ferry Marina	160.72	N	80	10	3	+353 867 357785	YY	YY	NN	YN	NN	
191	10	-N	Fenit Harbour & Marina	210.00	Y	130	>5	>5	+353 667 136231	YY	YY	YO	YN	<N	70
92	3	-Y	Greystones Harbour	385.00	Y	150	5	7	+353 128 73131	YY	YY	NO	<<	<N	25
177	8	-N	Kilmore Quay	230.72	Y	60	4.9	1.1	+353 539 129955	YY	YY	YY	YN	YY	10
198	11	-N	Kilrush Marina	204.00	Y	120	3.5	2.5	+353 659 052072	YY	YY	YY	Y<	<<	45
208	13	-N	Lough Swilly Marina	184.87	Y	167	2.5	1	+353 749 360008	YY	YY	NY	<<	NN	
87	2	-Y	Malahide Marina	397.00	Y	350	3	0.4	+353 184 54129	YY	YY	YO	YY	N<	30
241	18	-N	New Ross Marina	120.97	Y	66	3.5	3.5	+353 863 889652	YY	YY	YO	YY	Y<	50
117	4	-N	Poolbeg Marina	330.00	Y	100	4	8	+353 166 89983	YY	YY	YY	Y<	Y<	
160	7	-N	Salve Marine	252.11	N	40	4.5	3.5	+353 214 831145	YY	YY	YO	YN	YY	7
213	15	5N	The Royal Cork YC	176.25	N	220	3.5	2.2	+353 214 831023	YY	YY	YY	YY	YY	44
253	19	3N	Waterford Marina	95.19	Y	120	>5	>5	+353 872 384944	YY	YY	YO	<<	<<	30



Port of Ramsgate
Royal Harbour Marina

SAIL IN & SEE US

Have you considered a permanent mooring at the Royal Harbour Marina, Ramsgate?

- Kent's premier marina offering safe mooring 365 days a year with superb facilities
- 24 hour security, CCTV and foot patrols
- 40 tonne boat hoist
- Good road access

Please visit our website at www.portoframsgate.co.uk for our fees and charges
Contact us on: 01843 572100 or email portoframsgate@thames.gov.uk



UNIVERSAL MARINA
RIVER HAMBLE

Situated on the east bank of the River Hamble, Universal Marina's location is second to none, with acres of wildlife, woods and marshland. Universal with its thriving community, restaurant and yacht club is the perfect place to sail, work and relax

Call us for more information on:
Marina berthing, dry stack, dry sail, complete yacht maintenance & repair services, lifting & launching, storage inside & out, visitor berthing, commercial lettings & Bistro 8 bar & restaurant.

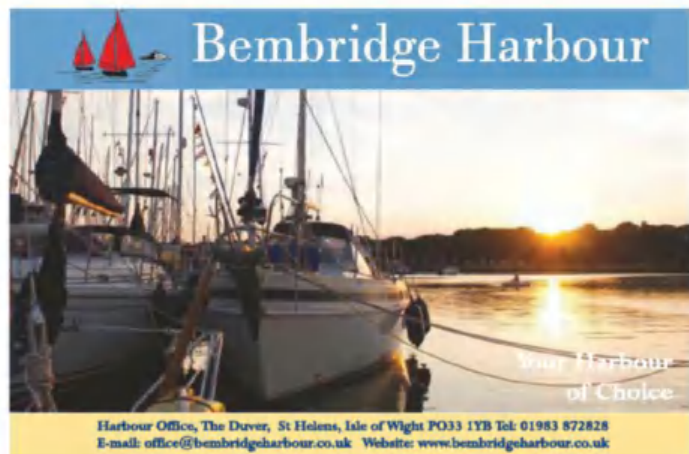
MARINA - COMMERCIAL - YACHT SERVICES - LEISURE
Universal Marina, Crableck Lane, Sarisbury Green, SO31 7ZN
www.universalmarina.co.uk | info@universalmarina.co.uk | 01489 574272



MALAHIDE MARINA
Welcomes Visitors, short-term or long-term

- 10 minutes from Dublin Airport
- 350 Berth full service marina and Boatyard

The Ideal Cruise in Company destination.
e-mail: info@malahidemarina.net
website: www.malahidemarina.net
Phone: 003531 845 4129



Bembridge Harbour

Harbour Office, The Duver, St Helens, Isle of Wight PO33 1YB Tel: 01983 872828
E-mail: office@bembridgeharbour.co.uk Website: www.bembridgeharbour.co.uk



Waterford Marina, South Quays, Waterford City

“Visit historic Waterford – Ireland's oldest City”

Waterford City Marina c/o Menapia Building, The Mall, Waterford
Tel +353 761 10 20 20/+353 87 2384944

Web: <http://www.waterfordcouncil.ie/en/>
Email: jcodd@waterfordcouncil.ie



TITCHMARSH marina

Annual Berthing Available
From £84.15 - £269.50 per metre + vat
Up to 10% prompt payment discount available on berthing

FULL MARINA FACILITIES • TEMPORARY BERTHING
• SPECIAL WINTER RATES • STORAGE ASHORE

T: 01255 672 185 E: info@titchmarshmarina.co.uk
www.titchmarshmarina.co.uk
Titchmarsh Marina Ltd, Coles Lane, Walton-on-the-Naze, Essex CO14 8SL

WILSONS BOATYARD

WHAT? A family run boatyard experienced in handling mono and multi-hulls up to 40' and 10 Tonnes. Offering tidal moorings, layup ashore or afloat, broad hard to dry out for surveys/prop change? Showers/toilets, free parking. Maintenance of hull, rigging & engines. Pressure wash & antifouling.

WHERE? One mile WNW of Chichester Harbour Entrance by sea and 5 miles south of Havant main line train station & M27/A27(M).

HOW? Just call us on (0) 2392 464869 or email info@wilsonsboatyard.co.uk



Weymouth Harbour

Perfect location; 5 minutes walk to the town centre, golden sandy beaches, an array of activities to suit visitors and opportunities to explore Weymouth, the Jurassic Coast and the surrounding areas.

Relocating your boat? Take advantage of our great value berthing package, comprising no annual tie-ins and free use of the slipway and drying grid.

- Visitor loyalty discount scheme continues
- Beautiful harbour and beaches
- Free yearly events
- More than just a stop over

Contact us on 01305 838423 or visit www.weymouth-harbour.co.uk



Find us on Facebook

Moor for less....
on the South Coast



Port Ellen MARINA

The welcome in Port Ellen will always be remembered.

On board with





This non - profit marina is not only for the promotion of Port Ellen and Islay but it provides a safe comfortable haven for yachtsmen passing through the Sound of Jura.

Please contact us on :

Email: portellenmarina@outlook.com or phone us on 07464 151200

MARINA BERTHS

Package Deals Available

Example: 25ft boat: all craneage/power wash/three months ashore and annual mooring from

£1582.50 inc VAT




KEMPS QUAY

Contact Sarah on 023 8063 2323 or sarah@kempsquay.com

PORTSMOUTH HARBOUR

HAVE YOU CONSIDERED THE BENEFITS OF A

TRADITIONAL DEEP WATER SWINGING MOORING?

Ie; 1/3 the price of Marina charges, privacy, kinder to your vessel
Moorings available, suitable for any craft up to 40ft and also Cat moorings. Complimentary ferry service

For more details and a brochure contact:

Gosport Boat Yard Ltd.

The Old Town Quay, Harbour Road, Gosport, Hants PO12 1BJ

02392 526534 & 586216

-also Fax 586216

gosportboatyard@tiscali.co.uk www.gosportboatyard.co.uk

FULL BOATYARD FACILITIES AND WINTER STORAGE

Davis's Boatyard

The family run Boatyard since 1964

All Boatyard Services available

Newly installed floating Jet ski Docks

Best value moorings in Poole Harbour inc FREE WIFI






Davis's Boatyard, Cobb's Quay,
Hamworthy Poole, Dorset BH15 4EJ

Tel: 01202 674349 www.davisboatyard.co.uk admin@davisboatyard.co.uk



120 berths and fully serviced boatyard.

Keep your boat on the west coast of Ireland and fly to Shannon Airport for less than the cost of a south coast Marina.

Ph 00353 65 9052072

E Mail info@kilrushmarina.ie

STRIPPER

PROPELLER PROTECTOR

Buy online at
www.ropestripper.com



Cavitation control is our speciality



Ambassador Marine
252 Hursley, Winchester,
Hants. SO21 2JJ
Tel (01962) 775405

Practical Boat Owner®

Be sure
to **rate**
& **review**

instantly on your iPad or iPhone

pbo.co.uk/digital



QUICK TO DOWNLOAD

EASY TO USE

AVAILABLE WORLDWIDE



NOOK® HD+

Google play

kindle fire

zinio™

Practical Boat Owner®

**MONTHLY EXTRAS,
EXCLUSIVE TO SUBSCRIBERS**

Rewards

**FREE latte at
Café Thorntons**

Thorntons Café

**FREE one month's
unlimited access to
Days Out discount
vouchers**

DaysOut
Discounted days out in the UK

**SAVE 25% or more on
tickets to Sandown,
Epsom and Kempton
Racecourses**

KEMPTON PARK SANDOWN PARK
Epsom Downs

**20% OFF bespoke gourmet
quality dishes and delicacies
at Forman & Field**

**FORMAN
&
FIELD**

**FREE haircut and blow dry
from the Hair Group**

THE
HAIR
GROUP

**GIFTS
FOR HER**

**20% OFF luxurious clean
skincare brand REN**

REN
CLEAN SKINCARE

Plus

**WIN tickets for the award-winning Regent's Park Open Air
Theatre, a luxury hamper and an overnight stay at London's
St Pancras Renaissance Hotel, worth over £600**

**OPEN
AIR**

ST PANCRAS
RENAISSANCE HOTEL

**This month, be sure to log in to Rewards to access the above offers and you'll
find even more online – all EXCLUSIVE and FREE to magazine subscribers.**

Redeem your rewards today at
pbo.co.uk/rewards

The Rewards scheme is available for all active print subscribers of magazines published by Time Inc. (UK) Ltd, free of charge. Closing dates apply to each partner offer. Please visit the Rewards website for more details. Full terms and conditions are available at mymagazinerewards.co.uk. For enquiries, contact rewards@quadrantsubs.com or call 0330 333 0233 between 8.30am to 17.30pm (GMT) Monday to Friday.

Maritime museums

Charles Warlow recommends 12 British maritime museums which are well worth visiting should you happen to be cruising in the relevant locale

Amongst the very many attractions of cruising around the coast of the UK are not just the pubs, restaurants, golf courses, swimming pools, scuba diving areas, historical sites, castles, aquaria, wildlife, bracing walks, beaches, chandleries and other less interesting shops – but also museums, mostly billed as maritime museums. Not just the

tourist honeypots like the *Marie Rose* or *Cutty Sark*, but small museums, full of local history and interest, run on a shoestring (mostly by volunteers), cherished by local people and seldom crowded. And yet they are rarely if ever mentioned in the guides to harbours and anchorages that appear in so many yachting magazines.

For a comprehensive list of more or less everything out there, there is an excellent

website: Maritime and Naval Museums in Britain and Ireland, people.ds.cam.ac.uk/mhe1000/marmus. It includes about 300 museums, with good maps and links, and is very useful for making contacts and for anyone writing guidebooks (or indeed sailing directions). Of course, I have only been to a small fraction; but to give you a taste of what there is, and to encourage you to get off your boats and take a look, here are 12 gems.

1 Maryport Maritime Museum



Today, it's hard to equate Maryport in Cumbria with its prosperous 19th century past: it was once the third-largest coal port in England, and home to the Holme line of clippers that traded all over the world. It currently suffers from terrible unemployment, but somehow it rises above all that with the friendly Life Boat Inn, and right next door is the delightful Maryport Maritime Museum. It is well laid out, with excellent activities for children: for example, they can learn the meanings of the code flags and spell their names with them. There is also a display of games sailors used to play on board ship.

■ www.maryportmaritimemuseum.btck.co.uk

ABOUT THE AUTHOR



Charles Warlow, 72, sails a Rustler 36 based at Dunstaffnage. He has sailed round the UK twice, round Ireland and to the Faroes, as well as starting

www.scottishanchors.co.uk.

2 The Mull Museum, Tobermory



Other (own work) GFDL (www.gnu.org/copyleft/fdl.html)

The Mull Museum is easy to miss, even though it's bang in the middle of the main street along the harbour front. This may be because it is small, modest and not painted in bright colours like many of the surrounding houses. It is a great wee place inside, however, with all sorts of bits and pieces not just of maritime interest, such as the tawse – that leather strap once used by teachers to whack naughty or ignorant children across the palm. You can learn about the remarkable story of *Neptune 2*, a Canadian sailing schooner on a 12-hour coastal trip round Newfoundland in 1929 which was blown across the Atlantic by a gale to end up nearly wrecked on Ardnamurchan Point 48 days later. You can also find out about the 'Terror of Tobermory', the admiral who trained recruits for the Atlantic convoys in the Second World War.

■ www.mullmuseum.org.uk

3 Stromness Museum

The main street in Stromness, Orkney, known simply as 'the street', is a museum piece in its own right, and one



has to walk most of its delightful length before reaching the lovely Stromness Museum. This records the town's history, which has been so wrapped up with the sea: whaling (returning sailors had to be treated for scurvy), the Hudson's Bay Company (in 1800, 418 of the 524 employees were Orcadians), Arctic exploration (John Rae was a son of Orkney) and the scuttled German First World War fleet in Scapa Flow (now a serious tourist destination for scuba divers).

■ www.orkneycommunities.co.uk/stromnessmuseum



Arctic explorer John Rae in his inflatable boat

4 Unst Boat Haven

On the Shetland Islands, the Unst Boat Haven must appeal to any serious boater. Inside a large, crowded shed there is an impressive collection of historical and restored Shetland open wooden boats, typically double-ended, which had been used for fishing. As ever in Shetland, there is a Norwegian connection: the wood to build the boats had to come from Norway, only 165 miles away, because there wasn't any on Shetland (and there still isn't any). And after all, Shetland only moved from being part of Norway to being part of Scotland in the 15th century.

■ www.unstheritage.com/web/unst-boat-haven



Inside the Unst Boat Haven, with its impressive selection of open wooden boats

5 The Harwich Society



The Harwich lifeboat museum

On the surface, there seems little to commend Harwich. However, as well as the friendly staff at the Halfpenny Pier pontoons, there is a rather good heritage trail put together by the clearly enthusiastic Harwich Society. You follow the trail to the lifeboat museum, old weather-boarded houses dating back to the 15th century, the 17th century treadwheel crane (with no brake, so there were a lot of accidents),

St Nicholas Church and the restored Electric Palace cinema, built in the days of silent movies. The trail ends up at the old lightship moored to the harbour

The Electric Palace

wall, where you can wander around brooding on what these things must have been like to live on in a full-blown gale.

■ www.harwich-society.co.uk



The Ramsgate Maritime Museum

6 Ramsgate Maritime Museum

Ramsgate's brilliant, volunteer-run Maritime Museum reopened a few years ago. It majors on Dunkirk (not surprisingly, as so many of the 'little boats' sailed from here) and covers many other aspects of local history. For me, the most fascinating part was a film made by an American journalist who, because the USA was neutral at the time, was able to embed himself in the advancing German army. The contrast between the laughing, relaxed Germans and the beleaguered British troops one associates with wartime footage is astonishing. It was also good to see a model of the original HM schooner *Pickle* which brought the news of Trafalgar and Nelson's death to Falmouth, where my own *Pickle* was built by Rustler Yachts.

■ www.ramsgatemaritimemuseum.org

7 Hartlepool and HMS Trincomalee



HMS Trincomalee – the oldest warship still afloat in the world

Hartlepool has a convenient marina in a vast dock, not in any sense a tourist destination from the land or sea, but it does boast one rather special sight – her tall masts towering above the puny modern spars of the yachts on the pontoons.

The *Trincomalee*, still floating, is a fighting ship built in Bombay and launched in 1817. Too late for the Napoleonic wars, she never fired a gun in anger. Personally, I think visiting her is preferable to visiting the far better-known fighting ship in Portsmouth, HMS *Victory*, or even HMS *Warrior*.

You can wander around on the *Trincomalee* wherever you like (rather than along a pre-defined route which you'd have to pay for again if you wanted to repeat the route, as on HMS *Victory*), and not be overwhelmed by crowds. Moreover, she is much more entertainingly and informatively displayed, all within the context of a reconstructed historic dockyard.

■ www.hms-trincomalee.co.uk/about-us

8 Chatham Historic Dockyard

Nliffanion (own work) [CC BY-SA 4.0 (http://creativecommons.org/licenses/by-sa/4.0/), via Wikimedia Commons]



HMS Cavalier at Chatham

The Historic Dockyard is a poignant reminder that Britannia once ruled the waves. Ships were built here by thousands of workers from the time of Elizabeth 1 until the 1980s, including HMS *Victory* and 57 assorted submarines. The dockyard is now a terrific and varied museum. It would take a whole day to do the place justice, but if you don't have that sort of time you should at least have a look at HMS *Cavalier*, a Second World War destroyer, and take the tour of the quarter-mile-long Victorian ropery. On the way out there is a huge RNLI shed full of 'stuff' including old lifeboats; a treasure trove indeed.

■ www.thedockyard.co.uk

9 Royal Navy Submarine Museum, Gosport



Inside HMS Alliance

All of us surface boaties must surely wonder what life was and is like in a submarine. A good way to find out is by visiting the Royal Navy Submarine Museum in Gosport, the highlight of which is HMS *Alliance*, a late 1940s submarine around which you are guided by a retired submariner (outside school holidays). It is cramped, complicated, full of pipes, dials... and torpedoes. The tour includes an audio recording of depth charges being dropped all around: how very scary that must have been.

■ www.submarine-museum.co.uk

10 Milford Haven Museum

Whether it was early in the season, or just very quiet, I don't know: but I was met here by a man who proceeded to tell me, most entertainingly, the story of Milford Haven, in about 10 minutes. Then he released me to explore the museum with far more insight than I would otherwise have had. Does he do this for everyone who wanders in off the street? What a treat it all was. The museum records the town's changing fortunes, from whaling to fishing to oil, and who knows where next. No wonder Visit Wales awarded it their 'Hidden Gem' accolade in 2015.

■ www.milfordhavenmuseum.co.uk



Milford Haven Museum/Pembrokeshire Photography

11 Wick Heritage Museum



A display in the Wick museum

Sailing around the north coast of Scotland, or across the North Sea, Wick is one of the few safe havens which can be entered more or less anytime. It has an excellent marina and a fabulous local museum, just a few yards away, staffed by helpful, informative volunteers who will show you into each of the many rooms in case you get lost when going round by yourselves. And what a wonderful collection of stuff – lighthouse memorabilia, old photos by a local family of photographers, domestic rooms furnished in various styles, information about the local printing industry, medals, fishing bric-a-brac, model yachts. And to cap it all, a lovely garden spreads up the hill in terraces at the back, full of flowers.

■ www.wickheritage.org/index.asp



www.wikimedia.org

12 Belfast Titanic Experience

In Belfast Lough, it is tempting to just pull up in either Bangor or Carrickfergus Marina: but if you sail on a bit, right into the centre of town, you will find pontoons very close to the Titanic Experience, opened in 2012. Modernistic, sited in the very place where the *Titanic* was built, it not only explores the disaster but also celebrates the workers who built her. The museum

uses all the up-to-date tricks of the trade, including a terrific ride in a steel bucket up through a reconstruction of the shipyard as the *Titanic* was being built.

■ www.titanicbelfast.com

■ So there you are. These and many, many other museums are out there to explore if you can drag yourself away from your boat, or the local pub. Visit them, discover more about our maritime past – and be sure to make a donation on your way out!

Your boat, our passion

seajet

We believe it's what others say about us that really counts! And with Seajet 033 Shogun self-polishing antifoul coming out on top of Practical Boat Owner's major independent group comparison test of 20x different antifoul products, we are proud to say that...



SEAJET 033 SHOGUN IS 'BEST ON TEST'
(PBO, JANUARY 2016)



For technical queries or questions regarding availability contact: Marine and Industrial LLP. Tel: (01692) 406 822 Fax: (01692) 406 866 Email: sales@marineindustrial.co.uk
www.marineindustrial.co.uk

Use Biocides Safely. Always read the label and product information before use.


A.S.A.P. Supplies

Products for Maintenance, Repair & Overhaul



Honest Advice · Reliable Service · Quick Despatch

T +44 1502 716993

F +44 1502 711680

E info@asap-supplies.com

W www.asap-supplies.com



Laura Hodgetts reports on the latest marine products



SoftScience Fin shoe

The SoftScience Fin shoe features a non-marking, slip-resistant outsole and a washable, odour-resistant, removable insole. The upper part of the shoe is made of a breathable microfibre, with a water flow system in the forefoot for getting into and out of the water without trailing water on your deck. It also dries quickly. Priced from £58 (£74.95), multiple colours available. ■ www.soft-science.eu

Icom's IC-M93D VHF/DSC marine radio



Said to be the next stage of evolution for a VHF/DSC handheld, this measures just 145mm tall and weighs 310g. It features a 2.4in high contrast dot matrix and a backlit LCD display, plus menu-driven functionality. Active noise-cancelling technology uses a digital processor to reduce background noise. The radio is designed to float on its back if it falls into the water, with the LCD, backlit keypad and distress button flashing, for easier retrieval. A man overboard function allows users to record the MOB time and position. An Aquaquake draining function clears water away from the speaker grill. The IC-M93D will be available later this year. Priced around £269.99. ■ www.icomuk.co.uk

Load-bearing collar

Tru Design Load-Bearing Collars are designed for use with their skin fittings and ball valves. With the collar, the entire assembly is promised to withstand a 500lb/227kg static force applied to the tail, for a minimum of 30 seconds – complying with ABYC H-27 rating. The collar was designed to eliminate the need for additional fasteners through the hull, and was a category winner in last year's DAME design awards. The jury 'appreciated this entry for its design simplicity'. Prices start about £8.

■ www.bainbridgeint.com



SatSleeve+ and SatSleeve Hotspot

SatSleeve+ and SatSleeve Hotspot, from mobile satellite services operator Thuraya, offer modern solutions for sailors who want to stay connected, however remote their location. The new SatSleeve Hotspot is a portable Wi-Fi hotspot, designed to make it easier to check emails, make a phone call or post on social media, whether you're in the North Sea or Indian Ocean. SatSleeve+, also new to the market, looks like a phone cover and clips easily onto smartphones, turning them into satellite smartphones. Users can make calls, send emails and messages, and use their apps directly on their smartphone. Both devices have an SOS button that connects to a pre-set number of your choice if you find yourself in trouble.

Both devices use Thuraya's satellite network across 161 countries in Europe, Africa, Asia and Australia, and prices for both start from £400 (before shipping and local taxes). ■ www.expansys.com



WABNET mobile Wi-Fi

WABNET is a 3/4G transceiver and Wi-Fi router built into an IP67 weatherproof enclosure. Designed to fit to the top of your mast, it is promised to extend connectivity range by four times, with reliable Wi-Fi within a 300ft radius. You can use a duplicate of your SIM card on your existing mobile network subscription to achieve a connectivity range of up to 30 miles offshore. Alternatively, you can use the private WABNET roaming free network. The mounting arm is adaptable to any boat, and a 12VDC power supply can be taken from the mast headlight or any other dedicated power line. Price £519. ■ www.wabnetmarine.com

Pole Position rope handling device

Wade Marine's Pole Position is a specially-designed extendable pole with both pole and rope guide attachments, which can be used to accurately place mooring lines at a distance over a bollard or cleat. The rope guide should be attached permanently onto the mooring line, ready to connect with the telescopic pole. Two prongs on the pole guide grasp the line and enable it to slide into the rope guide. Once clicked into place, the line can be moved wherever is required and quickly released. It can also be used on rescue devices. The PP1 pack (£71.99) includes two rope guides; the PP2 pack (£59.99) includes one rope guide.

■ www.wademarine.com



Gybe Tamer

This is said to absorb the shock loading of the mainsheet, particularly when gybing. It also reduces shock loads during rapid tacking, and minimises heeling owing to sudden gusts. Under light wind conditions it remains closed, but during gusts will extend progressively. When gybing, it remains closed until the boom passes the boat's centreline. If this transition is rapid the Tamer will extend, absorbing most of the boom's kinetic energy, before closing again. Under heavier winds the Tamer may extend to the maximum position, but this can be altered by conventional use of the mainsheet and traveller. On gybing, even if fully extended, it will close automatically before extending again to absorb the rapid movement, so during unexpected gybes it can potentially reduce injuries to crew and damage to rigging. It can be mounted between the traveller and mainsheet, or between the mainsheet and boom, using 6mm shackles. GT-1, suitable for up to 15m² mainsail area, costs £75; GT-2, suitable for up to 30m² mainsail area, costs £85. ■ www.jdp-marine.co.uk



WAECO CRX marine refrigerator

The CRX is the first marine refrigerator with a removable freezer compartment which can slide out to create a larger capacity fridge-only unit. Alternatively, the entire unit's temperature can be reduced to 17°F (-8°C) to provide a freezer. The CRX features a flush-mount electronic thermostat control panel, LED illumination and a three-speed variable compressor.

The refrigerator was a category winner at last year's DAME design awards. The jury 'liked its obvious flexibility and also the design detail evident, such as on the door catch that was nice to operate: a small but important point on any item of galley equipment'.

The CRX is available with either a stainless steel door or standard door, with six sizes available ranging from 45lt to 136lt. Prices start from £600.

■ www.dometic.co.uk

LCJ Capteurs' latest offerings



The WindyPlug is a new interface for LCJ Capteurs' ultrasonic wind sensors, allowing compatibility with existing NMEA 2000 instrument networks. The WindyPlug also features an embedded barometer. LCJ Capteurs offer a range of ultrasonic wind sensors, with both wireless and wired connections. They provide direct support to some brands, notably B&G and Raymarine, but the addition of NMEA 2000 opens their market to a wider range of equipment.

Another newcomer is the Sonic-Anemo-DVC, designed to connect directly to the wind sensor input on Davis instruments.

This sensor replaces mechanical anemometers and windvanes with only the need for a power supply.

WindyPlug costs €186 (£134), while prices for a sensor with WindyPlug start from €798 (£607.84). The Sonic-Anemo-DVC costs €814.8 (£586.70).

■ www.lcjcapturs.com

Ursuit FIR thermal heating vest



The impressive technology behind this thermal heating vest is promised to provide a safe method of keeping warm, even if it becomes fully immersed in water. The Ursuit FIR Deep Heat System is based on far infrared radiation, an electromagnetic radiation that reaches in the region of 3-5cm into the body and is said to last longer as it heats blood circulation and muscles, not just the part touching the heating areas, so your fingers and toes don't stay cold. Once charged, the lightweight, battery-controlled vest stays warm for three to five hours, depending on the heat level selected. The fleece vest has three built-in thermal pads, a battery and charger. Three heat levels, 60°C, 50°C and 40°C, are operated via one



button, which also turns it on/off and locks onto a heat setting when you press and hold for three seconds. Price £249.

■ www.andark.co.uk

PBO verdict

My mother-in-law Mag Hodgetts, who has been feeling particularly cold after knee replacement surgery, put the Ursuit thermal heating vest to the test over the winter. Mag was surprised by the four hours it took for the unit to charge, but said the vest then warmed up quickly. She found it comfortable to wear, although the battery pack was 'a bit chunky' in the pocket. Mag said her top half was kept toasty warm for the three hours the vest worked in the highest setting, but not the rest of her. My husband Drew also tested out the Ursuit vest and found it worked well, changing temperature quickly on different settings. He thought the lock function was a bit temperamental – sometimes not locking as expected, so he'd have to click back through the settings. Drew thought it did the job, but was quite expensive.

Laura Hodgetts

FLIR AX8 Marine Thermal Monitoring System

The AX8 combines thermal and visible cameras in a small package, and integrates with Raymarine LightHouse II-powered multifunction displays to keep an eye on critical equipment such as engines, exhaust manifolds and shaft bearings. The system was awarded a

Special Mention at the

DAME 2015 design awards. The jury commented: 'The AX8 visually highlights changes in temperature caused by hot spots and flooding and audibly alerts to them via programmable alarms. It also features FLIR's MSX technology to improve image interpretation.'

The recommended retail price is €1,095 (£788.50).

■ www.flir.com



www.JimmyGreen.co.uk

Reliable, Continuous Service since 1981

On the telephone
In store
Online

CUSTOM SPlicing and RIGGING SERVICE

01297 20744

Sales and Website Support

THE Jimmy Green FIRST CLASS RIGGING SERVICE

straightforward shopping @ **www.JimmyGreen.co.uk**

Enter the length and diameter of your rope or wire
Select the finish you want on each end, where required
and let our website do the rest

For complex enquiries we can offer a considered, bespoke solution
email sales@jimmygreen.co.uk or telephone 01297 20744

Only ever the BEST QUALITY ROPE, CHAIN and WIRE ~ We don't switch sell



LIROS



Marlow

STA-LOK®



PETERSEN
STAINLESS RIGGING LTD

We buy only the BEST QUALITY
Wire and Terminals
ALL
sourced in the UK

If you have any difficulty on the web we're here to help, just give us a ring @

All prices include VAT ~ Carriage is calculated in your basket by weight and destination
Express Delivery Surcharge: 1 Day £10, 2 Day £5, 3 Day £3 ~ Monday - Friday Mainland only
Surcharges apply on Hazardous or Heavy Goods and on delivery to Scottish Highlands and Islands

Jimmy Green Marine

The Meadows, Beer, East Devon EX12 3ES
9am-5pm Monday - Friday, Saturday 9am-2pm
E-Mail: sales@jimmygreen.co.uk ©



FORCE 4

The Right Choice at the Right Price

ONLINE E-NEWSLETTER

EXCLUSIVE DEALS DELIVERED STRAIGHT
TO YOUR INBOX - SIGN UP ONLINE

BRISTOL

Albion Dock Yard
BS1 6UT
tel: 0117 926 8396



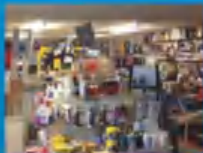
CARDIFF

Cardiff Marine Village
CF11 8TU
tel: 02920 787190



SWANSEA

Fishmarket Quay
SA1 1UP
tel: 01792 465570



PLYMOUTH

Queen Anne's
Battery
PL4 0LP
tel: 01752 548 301



DINGHY HARDWARE & REPAIRS

SWANWICK
Hamble River
Boat Yard
SO31 7EB
tel: 01489 588 875

www.dinghyboat.com

COMPLETE CUSTOM RIGGING

BURSLEDON
Deacons Boat Yard
SO31 8AW
tel: 02380 407 600

www.aladdinscave.co.uk

SAVE OVER 25%

Henri Lloyd Ultimate Cruiser Suit

SAVE £105

ONLY

£274.95

SRP £380



The ultimate in cruising apparel, available in both mens and womens fits, this range offers all the comfort, features and durability the serious cruising sailor demands

- OPTIVISION Hi-Vis foldaway hood
- Adjustable throat guard
- Dual handwarmer & cargo pockets
- Ergonomically styled for ease of movement
- Nylon reinforcement to seat

Mens: Red, Sizes: S-XXL
Womens: Navy, Sizes: S-XL

Order Codes 010408 Mens
010431 Womens



SAVE ON LOWRANCE

SAVE £69

ONLY

£329.95

RRP £399

Elite-5m HD Chartplotter

with Navionics Gold
Small Download Chart

- 5 inch super bright display
- Fully waterproof
- Internal 16-channel antenna
- Easy-to-use menus
- Quick release tilt & swivel bracket
- Easily flush-mountable
- 3000 Waypoints, 100 Routes
- NMEA0183
- AIS compatible
- Chart page & Steer page

Order Code 210344



NAVIONICS GOLD
CHART INCLUDED!

www.force4.co.uk

PROMPT DISPATCH. Orders dispatched within 48 hours subject to availability. Postage and packing will be charged as follows: Mainland UK: Jiffy Bag up to 1kg - £5.95 Standard - £9.95 Next Day - £9.95 Channel Islands: Small, low cost items up to 2kg up to 20kg - £9.95. Literature (UK/Mainland only) £1.4 Pans & Dinghies (UK Mainland only) £10.00 Overseas: charged at cost. Customers outside EU: Divide prices by 1.2. All prices correct at time of going to press but subject to alteration without prior notice.

CHANDLERY

EST.
1977

LIFEJACKETS



Crewsaver®

SAVE £37
ONLY
£129.95
RRP £167.50

Ergofit 190 CS
Automatic
with Harness

190N

- Fast-fix rear buckles
- 3D contour shaping
- Breathable, quick dry mesh lining
- Firing mechanism status window
- Dual lifting beackets
- Dual crutch straps
- External pocket
- Knife pocket
- Sprayhood, SOLAS approved light, whistle & reflective tape

Order Code 550272



with
hood, light
& display

seaco

SAVE £40
ONLY
£99.95
RRP £139.95

305ETS Automatic
with Harness

- Increased 305N buoyancy
- Compliant to ISO 12402-2
- Pre-fitted integrated crutch strap
- Harness with Heavy Duty S/S D-ring
- Lifting beacket
- Tough nylon outer cover
- 60g gas cylinder

Order Code 550284

**FORCE 4
EXCLUSIVE
OFFERS!**
Buy in store
& online

ANTIFOUL - SAVE UP TO £40

HEMPEL
Hemp Sailing



code: 400016 (2.5l)
SRP £69.95
offer price **£49.95**
£19.98/ltr



code: 400013 (2.5l)
SRP £112.50
offer price **£79.95**
£31.98/ltr

International



code: 400017 (2.5l)
SRP £130.00
offer price **£89.95**



code: 400015 (2.5l)
SRP £99.95
offer price **£59.95**
£23.98/ltr



code: 400014 (2.5l)
SRP £129.65
offer price **£89.95**
£35.98/ltr



code: 400025 (2.5l)
SRP £136.95
offer price **£99.95**
£39.98/ltr

**3L
can**



code: 400011 (3l)
SRP £99.96
offer price **£69.95**
£23.32/ltr

**Shaft Anode/
Rope Cutter**



NEW
Code 460089-25
ONLY
£42.95

FLAG

code: 400004
(2.5l)
SRP £38.99
£34.95
£13.98/ltr

seajet

code: 400017 (2.5l)
SRP £59.00
offer price **£52.95**
£21.18/ltr

code: 400014 (2.5l)
SRP £89.00
offer price **£79.95**
£31.97/ltr

code: 400013 (2.5l)
SRP £118.00
offer price **£104.95**
£41.98/ltr

**VISIT OUR
NEW STORE**

POOLE

The Quay
Lymington BH15 1JH
tel: 01203 873054

POOLE

Bournemouth Rd
Parkstone
BH14 9HR
tel: 01202 723311

LYMINGTON

Bath Road
SO41 3RU
tel: 01590 673698

CHICHESTER

Donnington Park
PO20 7DU
tel: 01243 773788

SOUTHAMPTON

Shamrock Quay
SO14 5OL
tel: 02380 632725

BURSLEDON

Deacons Boat Yard
SO31 8AW
tel: 02380 402182

SWANWICK

Swanwick Marina
SO31 1ZH
tel: 01489 881825

HAMBLE

Hamble Point
Marina
SO31 4NB
tel: 02380 455058

Mercury Marina
SO31 4HQ
tel: 02380 454849

Port Hamble Marina
SO31 4OD
tel: 02380 454858

OPEN SUNDAYS ALL YEAR

**FORCE 4
CHANDLERY 16**
The Right Choice in the Right Place

**FREE
CATALOGUE**
request yours
online

www.force4.co.uk call our mail order team
0345 1300 710

0345 1300 710

**MOBILE
FRIENDLY
NUMBER**

- £5.95; Larger items 0-20kg - £19.95; Highlands, Islands & Northern Ireland: Small low cost items in Jiffy Bags up to 1kg - £3.95; Small low cost items in Jiffy Bags up to 1-2kg - £5.95; Larger parcels E & OE: PBO & YM 04/16



Gael Force
MARINE EQUIPMENT

GAELFORCEMARINE.CO.UK



0345 450 1078
01463 229 400

**1,000S MORE PRODUCTS
AVAILABLE ONLINE**

FREE DELIVERY ON ORDERS
OVER £100*

CRUISE ISO 150N

ISO version of our popular Cruise 150N lifejacket. Conforms to both CE EN396 rating and ISO12402. Designed for day cruising or visiting crew it comes with all the features you would expect from a 150N gas inflation life jacket.

MANUAL £36.99
BUY TWO FOR £70
MANUAL HARNESS £44.99
BUY TWO FOR £80
AUTO £46.99
BUY TWO FOR £82
AUTO HARNESS £49.99

**FROM
£35**



**ALL OF OUR LIFEJACKETS
ARE MADE HERE, IN THE UK**



Gael Force Lifejackets

FASTNET XT ISO 150N

The Fastnet XT now conforms to both ISO12402 and EN396 standards. Fitted with the UML Pro-Sensor the jacket has a 'buddy' window that indicates to the wearer and other crew members if the gas canister or tablet need replacing. Grey or Red.

MANUAL £56.99 BUY TWO FOR £100

MANUAL HARNESS £62.99

BUY TWO FOR £110

AUTO £64.99 BUY TWO FOR £114

AUTO HARNESS £69.99

BUY TWO FOR £124

FASTNET XT ISO PRO 170N & ISO PRO 275N

Packed with features the Fastnet XTPro is ergonomically designed for a slimmer, more comfortable fit. There is a mesh back for a better fit which also stows away the crotch strap when not in use. Conforms to both ISO and EN396/9 standards.

170N £134.99 SAVE £35 **£99.99**

275N £139.99 SAVE £25 **£114.99**

OCEAN STANDARD LIFERAFT

The 'Ocean Standard' liferaft is an affordable liferaft from Ocean Safety. A quality yet practical entry level liferaft, which is ideal for coastal and short offshore recreational boating and non-coded craft. Available in Valise or Canister.

4-Man Valise RRP £599 **£549**

4-Man Canister RRP £649 **£599**

6-Man Valise RRP £749 **£699**

6-Man Canister RRP £799 **£749**

8-Man Valise RRP £859 **£849**

8-Man Canister RRP £899 **£889**

- Made with quality rubber
- Insulated floor
- Highly visible orange canopy
- 4 x 30 litre water pockets
- Zip closure on entrance
- Rain water dispenser system
- Automatic light and ORC safety pack.

GAEL FORCE ANTI-FOULING

Copper based self eroding antifouling for areas of low to medium fouling. Suitable for use on GRP, Wood, Steel and Ferro cement as well as use on drying moorings. Colours: Red, Navy, Blue & Black. 2.5 litre

**ORDER 2 TINS
AND GET A FREE
PEAR-SHAPED
ANODE(2.1KG)**

WORTH
£14.99

★★★★★
Excellent 9.2
Trustpilot.co.uk
Our customers
love us!



**PRICE
HELD
£34.99**



**1LTR
£7.95**

**2.5LTR
£28.95**

JABSCO TOILET Twist 'n' Lock



**COMPACT
MODEL
£99.95**

The Twist'n'Lock action handle guards against syphonic flooding and waste backflow. With one easy 90° turn of the handle, the lock is applied.
Regular £139.99 Model

NEPTUNE 4500

Marine Cooker 2 Burner

The Neptune 4500 features: - Quick boil burner - Flame failure device on burners - Thermostatically controlled oven - Easy clean hob - Stylish new design - Hob burners heat input. There's an overall improvement to the design too making it very stylish!

FREE GIMBALS
WORTH £66.99

**ONLY
£479.95**



GAEL FORCE MARINE, 136 ANDERSON ST, INVERNESS, IV3 8DH
VISIT US ONLINE AT GAELFORCEMARINE.CO.UK
CALL OUR SALES TEAM ON 01463 229400 LO-CALL SALES LINE 0345 450 1078

DELIVERY CHARGES: STANDARD UK DELIVERY £8.25 - EXPRESS UK DELIVERY £15.95 - FRIGES INCLUDE VAT, CARRIAGE CHARGES ARE UK MAINLAND, UP TO 15 KILOS AND NON-HAZARDOUS PRODUCTS. PRICES VALID UNTIL END OF MARCH 2016 OR WHILE CURRENT STOCKS LAST. PRICES ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE, ERRORS AND OMISSIONS EXCLUDED.

Find us on



12VOLT PLANET

Auto & Marine Electrical Components

Full range available
victtron energy

Electrical components, parts and accessories for all your boat wiring needs

- Full range of UK-made tinned copper cable
- Connectors, terminals, fuseboxes, busbars, switches
- Battery management products
- Interior and exterior LED lighting
- Web & phone orders – fast delivery
- Trade enquiries welcome



www.12voltplanet.co.uk

Tel: 01865 236446 Email: sales@12voltplanet.co.uk

[facebook.com/12voltplanet](https://www.facebook.com/12voltplanet) twitter.com/12voltplanet

Launch offers



Ocean Safety KruSport 185 Lifejacket

From
£59.95

& FREE lifejacket light worth £19.95



Seajet Antifouling 033
'Best on Test'

£79.95

FREE application kit worth £10.00

(Incl. paint tray, roller head, brush, gloves & masking tape)



Full Range of Flares
from just

£64.95

Special UK
mainland delivery
for just £5.00

BRUNTONS PROPELLERS

www.bruntons-propellers.com



VARIFOLD

The ultimate propeller for cruiser racer yachts. A unique blade design ensures the lowest possible levels of noise and vibration with excellent performance ahead and astern under power, and minimal drag under sail.

Prices start from
£595.00 + VAT

AUTOPROP

Lets you sail faster... and motor further. The unique auto pitching abilities of the Autoprop propeller have made it a firm favourite among cruising yachtsmen for many years.

Prices start from
£1035.00 + VAT

SIGMA DRIVE

...the 21st century solution to **noise** and **VIBRATION**. The SigmaDrive is an easy to fit, no maintenance unit made from a special bronze alloy and contains no rubber or bearings. There is a model for virtually any type of drive.

Prices start from
£375.00 + VAT

Autoprops, Varifolds and SigmaDrives are available for engines from 8hp upwards

Bruntons Propellers Ltd

T: +44 (0)1255 420005 E: sales@bruntons-propellers.com

W: www.autoprop.info • www.varifold.info • www.sigmadrive.info

Oakwood Business Park, Stephenson Road West, Clacton-on-Sea, Essex, CO15 4TL, UK



Henri Lloyd Wave Suit (new for 2016)

Only
£260.00

FREE Henri Lloyd case worth £80.00 with every Wave suit



MYLOR CHANDLERY
& RIGGING

Find more offers online at
www.mylorchandlery.co.uk/pbo

sales@mylorchandlery.co.uk | 01326 375482



More sticky situations

Sticky Stapylton dispenses a few more hard-won seamanship tips

TIP 1

Engine checks

Daily engine checks are an essential part of ensuring that you will be able to get home or out of trouble when the wind dies. The photo (right) shows an accumulation of black dust in the engine compartment where the alternator, cam and crankshaft wheels may have become misaligned and caused excessive wear on the drive belt. The belt could be depressed at least $\frac{3}{4}$ in and the engine compartment was covered in fine black dust, which showed that the belt was wearing away.



Guarding against belt failure

A close look at the nearer old belt in this photo (left) shows that it has worn considerably narrower than the new one. If the belt fails there is a chance of overheating, engine damage and, almost certainly, the need for a new impeller.



TIP 3

Umbrellas on boats

There is an old saying that one of the most useless things on a boat is an umbrella. I disagree. Once, when fitting a lifebuoy holder onto the pushpit of a boat, I set up my umbrella underneath the fixture point. In the cold weather, and with a fiddly nut and bolt, I dropped the nut – but it was saved by the umbrella!



TIP 2



Extemporisation panned out well

No anchor ball on board? We used a two-handled saucepan to indicate we were at anchor!

TIP 4

Digging in your anchor

Every now and again I go to sea with sailors who do not anchor very often. Inevitably, with yachts which are more reliable than before, and with the plethora of marinas giving simple berthing, we are encouraged to take the more convenient option of a pontoon berth. It is important that those who have to anchor are aware that the windlass is a device for laying and weighing an anchor: it is not to be used for digging the anchor in. Many years ago I was on a charter boat where the anchor had been dug in by going astern with some force, I assumed with the chain still on the

gypsy. The windlass had been torn completely off its mountings.

It is essential, therefore, to rig a snubbing line which will take the strain when digging in your anchor. A good old rolling hitch is tied onto the chain and taken to a cleat rather than the windlass. It is important also that the warp you use for this is nylon, which is up to 30% more elastic than polyester. Nylon will absorb the energy generated when a yacht moves, giving you a more comfortable rest when at anchor. Provided you have plenty of room to swing at anchor and if there is a forecast of a wind increase, it is worthwhile letting out more warp to give you a greater length of elasticity.





Skep has proved to be weatherly and fast



Skep and the Steynor Keel

Ben Meakins is invited aboard Will Steynor's 7.6m (25ft) gaff cutter *Skep*, fitted with Will's own practical, ingenious, space-saving design innovation – the Steynor Lifting Keel



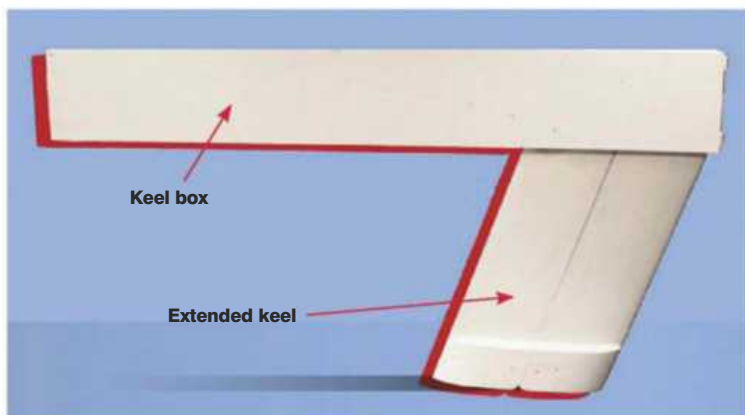
Skep's trial launch, with her keel locked down

Lifting keels have many advantages – but the design has generally not moved on for many years. Lift keels are usually one of two designs: a plate which hinges up like a dinghy centreboard, or a daggerboard which drops down through a slot. These have worked for years, but have their drawbacks: they take up valuable space in the cabin and tend not to lock down, which means that they can withdraw should the boat invert.

That's the problem that encouraged Will Steynor, a retired airline pilot, to come up with his own design. Will's background, flying BA aircraft before his retirement – and



Operating the Steynor Keel



1 This shows the extended keel and the box into which it retracts. In this situation, with the keel touching the ground, the keel is locked in position.



2 Pulling on the retraction strap, which runs between the two plates and terminates inside the bulb, initially moves the top of the aft plate rearwards. This movement allows the top of the aft plate to clear the down lock stop, which it engages with when the keel is touching the ground.



making guitars, cabinet work and keeping bees ever since, as well as a childhood spent inventing and tinkering – led him towards a solution. ‘Having flown for years, I have never boarded an aircraft to find a large box in the cabin to house the undercarriage,’ he told PBO. ‘On small cruising boats, space is at a premium – but with swinging or lifting keels there is always a keel box in the cabin.’

His solution is the Steynor Keel. Housed in a shallow box which will fit under the cabin floor, the keel is similar in principle to an aircraft undercarriage. Consisting of two parts that are linked with a hinge located in the keel bulb, it extends under its own weight, and locks into place to become a fixed keel that can take the full weight of the boat.

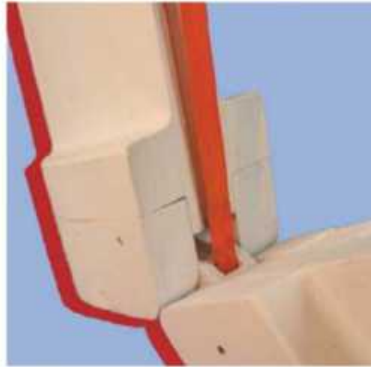
To retract, a manual or electric winch tensions a webbing strap which runs down between the two halves of the keel, which lifts the bulb, and the top of the aft half of the keel runs along rollers, allowing the whole assembly to raise and retract into its box. This also means that the centre of gravity of the keel is low even when retracted, making the boat nicely stable even with the keel up.



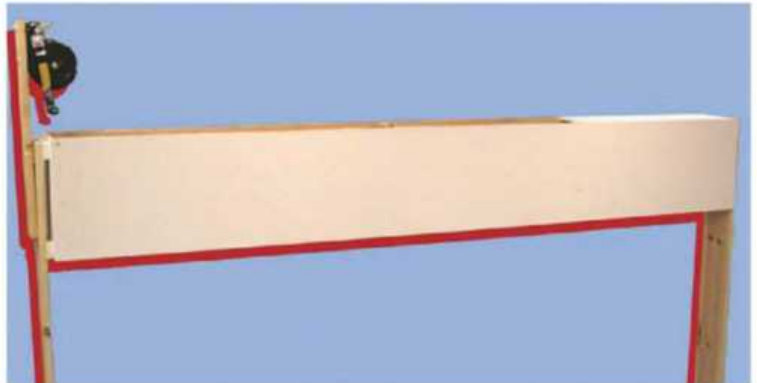
LEFT The keel was mocked up in plywood, before being cast in iron – seen here in the foundry



3 This shows the keel partially retracted. For this boat, the strap enters the keel box at the rear. The strap then passes over a roller at point X, over the top of Plate 2 and then down a slot in the joint between the two plates and is attached to the hinged link. The keel bulb houses the hinged link.



4 The hinged link is now visible, as is the strap connected to it and the slot in the front edge of Plate 2. The front plate, Plate 1, is hinged on a substantial shaft and is similar in most respects to a swing keel. The rear plate, Plate 2, is connected to Plate 1 by the hinged link at the bottom and at the top is supported on a cross shaft with a pair of 2in wheels. The wheels run on guide rails which are on the inner faces of the keel box.



5 The keel is now fully retracted. The whole assembly retracts inside the keel box, leaving nothing protruding.



LEFT An electric winch raises and lowers the keel. The webbing is about 2m long, so a purchase is used to act as an indicator and to operate the limit switches (circled)



INSET The keel is controlled by this switch, concealed to starboard of the companionway

A close look at Skep

Having built a prototype of the system, Will's next step was to get the keel installed in a boat of his own. Having always wanted to build his own boat, he killed two birds with one stone and commissioned designer Stuart Roy to design him a 7.6m (25ft) gaffer, into which his revolutionary keel could be installed.

Skep, named after the domed hives used in his beekeeping hobby, was the result. She was built over the space of three years, and her designer had some tricky design parameters to work with – the boat had to fit through the door of Will's workshop! Built upside down, the hull was planked with 12mm marine plywood, sheathed with glass and epoxy and painted before being turned over, fitted out and the keel added before her trial launch in July 2013.

Will is delighted with the result, and receives kind comments and praise wherever he and *Skep* go. But there's more to her than meets the eye – *Skep* is something of a wolf in sheep's clothing. Her fin keel and bulb gives her excellent windward performance, but the Steynor keel box, living under the



Skep's cabin table features a marquetry beehive



floorboards, gives her plenty of space – and standing headroom – inside. In fact, when we visited her at Poole Yacht Haven after the Round the Island Race in 2015, she felt much bigger than her 25ft dimensions would suggest.

Will's lineage – he comes from a family of engineers and inventors – was much in evidence as he showed me around the boat. Some of the tweaks and design features are inspired.

The keel, around which the boat is built, can be operated either by a manual or electric winch. Will has used an electrical winch, operated by a switch in the companionway. A system of block and tackles operates the limit switches for the keel, and provides a visual indicator of its position. The winch is mounted in front of the engine and is contained within the engine box.

The forepeak

The forepeak, meanwhile, houses the water tanks underneath a generous double berth. In common with many boats, there is a removable infill piece to turn the two single bunks into a double berth – but Will's is different to most in that it hinges on its forward edge. Underneath, a clever system uses two wooden springs and a pull cord to make a quick-release and easy-to-store locking system for the panel – the flap and cushion fold down when not in use.

Will's particularly proud of his saloon table. When not in use it folds up against the bulkhead, with the boat's logo – a bee skep – inlaid into the visible face. It folds down and pivots on a clever mounting to make a small table, but if required this can also fold out again to double in size, revealing some more marquetry in the form of a compass rose. An angled support extends from beneath the table.

In the cockpit, a similar table can be removed from its mountings in the cockpit locker and fits under the tiller with minimal fuss.



The table can be used half-size, or, as here, folded out to full size



The table stows on the bulkhead



The forepeak infill piece hinges and slots into place



A system of wooden springs and stainless rods secures the infill

The boat's electronics are nicely hidden, too. A Garmin chart plotter sits on the forward bulkhead of the cockpit, but is on a removable panel which can be reversed to protect the plotter – which can then be used from the skipper's bunk inside, while remaining waterproof. The mounting socket and electrical connections for the tiller pilot are hidden in a flush-mounted box inside the cockpit coaming, keeping them out of eyesight and out of harm's way.

Gaff cutter rig

Skep's gaff cutter rig has proved easy to handle, and the boat has entered two Round the Island Races since her launch. In the first of them, lack of wind meant that Skep had to retire along with more than half the fleet, but last year's was plenty windy, and Will recalls passing some production cruising yachts whose crews looked surprised at being passed by a gaffer – her secret weapon hidden well below the water.

He's delighted with the boat, and particularly the keel, which offers the advantages of a fin keel with all the benefits of a lifting keel – but none of the drawbacks traditionally associated with keel boxes and barked shins. He would welcome enquiries from anyone interested in adding one to their own boat, or in licensing the keel to boatbuilders.

■ www.steynor-keel.co.uk



The Garmin chart plotter can be viewed inside and out



A cockpit table fits under the tiller



033 Shogun Antifouling 2.5L
RRP £92.00
£74.95



Tiger Xtra Antifouling 2.5L
RRP £99.95
£59.95



Cruiser UNO



EU 3L
ONLY £69.95!
RRP £99.95



Micron Extra 2 2.5L
RRP £126.00
£89.95



Interspeed Ultra 2.5L
RRP £133.00
£94.95



Hard Racing Antifouling 2.5L
RRP £112.50
£69.95



Trilux 33 2.5L
RRP £109.95
£89.95

OUR CUSTOMERS RATE US AS EXCELLENT 9.6!



MARINE SUPER STORE

marinesuperstore.com

02392 219 433

Port Solent • Chichester



Valid until 30th April 2016 only

Rhyl life

Times are changing for this historic North Wales harbour, as Ali Wood discovers



In the autumn, yachtsmen from Conwy, Anglesey and beyond can be seen making their way en masse to Rhyl.

On a clear day, harbour master Arthur Davies can see them 12 miles away rounding Llandudno's Great Orme and arriving, a few hours later, at Rhyl's futuristic lifting bridge, which spans the River Clywd at the entrance to the inner harbour.

Why, with its mountain-fringed coast, historic towns and quaint anchorages, does the Menai Strait not keep these boat owners over winter? The answer is simple: cost, convenience and shelter. Rhyl is like a second home for boats; it's a convenient bolt-hole for the north-west cities, a pleasant location to lay up for winter chores, and the rent is reasonable. But even in the spring, when the cruisers return to their deep-water moorings, Rhyl's drying harbour attracts dinghies, trailer-sailers and motorboats, whose owners rent caravans for the season and launch from the slipways at the harbour and Rhyl Yacht Club.

Built by Edward I to supply



Rhyl at low water, photographed by harbour master Arthur Davies

Rhuddlan Castle by sea, Rhyl Harbour is over 700 years old. Even the yacht club dates to 1880, when the town was a vibrant holiday resort with a shipyard and railway that crossed the harbour with a swing bridge, its train timetables scheduled around tides. These days the harbour is considerably quieter and a popular spot for cyclists, walkers and birdwatchers.

'The harbour's amazing at low

water,' says Arthur Davies. 'You can see half a dozen white egrets, curlews and oystercatchers, as well as turnstones feeding around the banks on the flood.' Adjoining the harbour is Horton's Nose nature reserve, one of the last sand dune systems on the North Wales coast, which is criss-crossed with boardwalks and marram grass. From here you can spot the odd lizard, skylark or harbour seal, and

can look across to the Victorian and Edwardian buildings of Rhyl's West Parade.

Arthur's office is the top floor of the smart new harbour complex, which has a café and cycle shop. When he's not boat (and bird) spotting, he's busy lifting the 50m-tall mast of Pont y Ddraig (Dragon's Bridge) to let boats in and out, before closing it to let cyclists onto National Route 5, which crosses the bridge and joins Reading to Holyhead.

When I find Arthur he's single-handedly launching a fishing vessel called *Eleanor* with a remote-control hoist. Clad in his waders, he reverses the boat down the slipway until it floats off its slings. Skipper Tony and son Simon then motor *Eleanor* under the bridge to the waiting pontoon where I join them for a sail.

I learn that this is *Eleanor*'s first outing since she broke her springs in the harbour eight weeks ago, sustaining hull damage. It was blowing less than 20 knots, but the combination of wind direction and a low-pressure system caused 1m swells on the slipway.



'It's best to avoid Rhyll in north-westerlies to westerlies over Force 4 because of the swells and the difficulty getting in,' advises Tony. 'The channel is very narrow. There are lots of sandbars, and it's difficult to control the boat when the waves roll in. They pick you up and you find yourself surfing.'

Because of the damage *Eleanor* sustained, Tony would like to see the harbour wall extended. This is something Arthur agrees with, as it would deflect swells and prevent further silting of the harbour, which worsened as a result of the bridge works. There's a bank marked by a pink buoy, and the silt is being dragged away by diggers every three months. However, re-profiling work needs to be done gradually so as not to disturb the ecology, which is essential to marine life and wading birds. Ideally, Arthur would like to see a new marina at Rhyll too, which would improve sea defences and accommodate yachtsmen at all states of the tide. Before Christmas there were developers on site looking at the feasibility. 

Pilotage – approaching Rhyll



On a clear day, the Sky Tower on Rhyll seafront can be seen from 12 miles away

Rhyll Harbour is located to the west of Rhyll and is the boundary between Rhyll and Kinmel Bay. It has a drying height of 4m above chart datum, and is only suitable for vessels capable of taking to the ground. Entry and exit by a 1.5m-draught vessel should only be undertaken during the period +/- 2 hours high water. Access to the inner harbour is via the pedestrian/cycle bridge and subject to wind strength and tidal height. To arrange opening, call the harbour office on VHF Ch14.

A good landmark

On a clear day, the Sky Tower on Rhyll seafront can be seen from 12 miles away

and is a good landmark to head for from the north.

If approaching from the west, call the harbour master to open the bridge when reaching the Fairway Buoy N53°19.60, W003°32.00.

If approaching from other directions, call the harbour master 1NM from the Seaward



Perch (Light Q.R.), which marks the start of the channel, N53°19.45, W003°30.43.

Note, when the concrete base is covered, there is around 0.9m of water in the shallowest part of the channel. Stay no further than 15m from the Perch. Stay close to the flashing port-hand beacons. Deepest water is between 5m and 20m from the beacons. If arriving out of hours, or if the bridge is closed, moor alongside the

waiting pontoon. However, this is used by commercial vessels in the day, so is for short stays only.

To proceed to the inner harbour, leave the centre harbour pontoon to starboard (marked with a preferred channel to port beacon, green conical topmark and G(2+1)6s light).

Pass under the pedestrian/cycle bridge southern span.

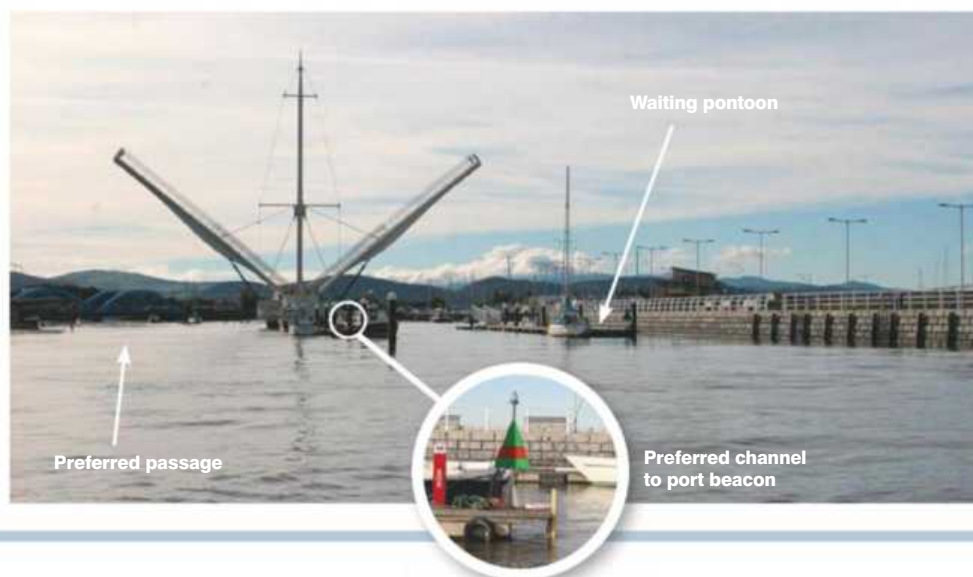
Contacts

Rhyll Harbour, Horton's Nose Lane, Rhyll LL18 5AX
Tel: 01824 708400, email: rhyll.harbour@denbighshire.gov.uk

■ www.denbighshireleisure.co.uk/rhyllharbour.html
■ Rhyll Yacht Club, www.rhylyachtclub.co.uk

Rhyll Harbour facilities

■ 12-ton subhoist boat lift
■ Boat park and launch
■ Slipway (65 x 8.5m, 1 in 10 slope)
■ Moorings
■ Visitor pontoons with power and water
■ Café, tourist information and bike hire



'Strategically, it's always been thought that this is a good area for a marina,' says Arthur. 'It's a good stopover for Liverpool, which you can only access an hour-and-a-half either side of high water. It would be similar to Conwy, with a moving sill.' In the meantime, plans are in place to build a stone groyne to the west of the harbour entrance, which will break up the wave action in westerly to north-westerly winds, making the entrance safer and reducing sandbanks.

Tony releases the lines and Simon takes the helm, driving out past the port beacons that mark the entrance to the channel. This is a trial run for *Eleanor* before she takes passengers out fishing on the weekend. In the distance I can see the Rhyl Flats offshore windfarm, a 25-turbine operation that yachtsmen mostly sail inside of unless heading to the Isle of Man. Work is still being carried out at the site by catamarans, and one was brought back to Rhyl Harbour recently by the RNLI after a crew member slipped and broke his leg while trying to put out a fire.

After a motor along the coast, Tony is satisfied that *Eleanor's* running well, and we turn around and follow the channel markers back into port. Simon points out the 240ft Sky Tower, a landmark since 1993 when it was acquired from Glasgow Garden Festival. He



Fishing boat *Eleanor* in a remote-control hoist



Arthur Davies reverses the hoist down the slipway...



...until the boat reaches the water



***Eleanor* floats free of her slings**

remembers going up the tower with his friends, but tells me it's now closed, and the gondola removed amid safety concerns. He also points out the site of a pub where he used to play in a band, but that was later demolished.

'They let Rhyl get run down, but it's nice they're putting it back

together again,' he says. 'There was so much that was good about this place that they could have kept going, and now they're having to redo it all.'

Like many Victorian seaside resorts that lost out to the package tour industry, Rhyl might have seen better times. However, Simon

points out the site where work will shortly begin on a new retail and leisure park. As we return to port under the lifting bridge, and pass the latte-drinking crowds outside the Harbour Hub Café, I sense the town's revival is just around the corner. And as for a marina? Well, watch this space!

Meet the people who make Rhyl work...



**Frank Goodchild,
Rear Commodore,
Rhyl YC**

'I like to go out fishing from Rhyl.

You catch a lot of mackerel in the summer, and a few cod and bass.

'We have boats at Rhyl all year round, although the majority lift out for the winter. We mainly go to Conwy from here – it takes around five hours. Lots of our members moor there for the summer but lay-up here over winter as we're cheaper than anywhere else. It's easy to park up and there are nice walks along the seafront, too.

'There are two pubs down the road, and both of them are pretty good and keep their prices down.'



**Mike George,
secretary,
Rhyl YC**

'It's really easy to keep your boat here and launch, although the harbour can be a little challenging at times because of the currents. I tend to go out on the ebb to the windfarms, do a bit of fishing and come back on the flood. If I was to go overnight I'd head for Conwy.

'Rhyl is a private members club, but visiting boat owners are welcome. We have toilets and shower facilities. Any member of the club would be pleased to welcome you. If you've got time to explore, you can head down the coast to Colwyn Bay and Llandudno. St Asaph cathedral is also really beautiful, especially when there are choral services going on. They always make you feel welcome.'



**Arthur Davies,
harbour
master**

'Up until the '60s this quay wall was used by coasters bringing timber

from Scandinavia. The boatyard was a timber yard, and it had its own railway. Just outside our building we have a turntable, and that was the old engine shed.

'We're here in the summer from 8am until 8pm and in the winter from 9pm until 5pm. We don't get many visitors. We have a few from the Wirral and West Kirby. Generally, they're 26 to 28ft bilge- and lifting-keel yachts. We have space for half a dozen visitors here. When the yacht clubs lift out for winter, we'll get a dozen or so rafted up in the inner harbour the night before.

'It's not a bad trip to Conwy from here. Launch here an

hour before high water and you can still get in over the banks at Conwy, to save you going all the way to the Fairway buoy – which adds three to four miles.' (See 'Convivial Conwy' PBO October 2015).



**Tony Parry, skipper of
fishing vessel *Eleanor***

'There's a preferred channel marker in the harbour – probably the only one in the Irish Sea! It's a preferred channel to port: you can use the starboard channel if you wish, but this becomes a pain in the backside for us when we're trying to manoeuvre from pontoon



A view of the Horton's Nose nature reserve

Exploring Rhyl and the countryside

You can pick up a series of town trail leaflets at the tourist information hub by the café in Rhyl Harbour.

Start with Rhyl itself and visit the site of Rhyl's biggest mystery, Little Venice. Under the buildings of West Parade, where the Queen's Palace arcade and ballroom once were, there's said to have been a flooded basement full of gondolas and canals! The building was burnt down in 1907, but it's possible that Little Venice still survives.

You can explore Edwardian Rhyl at the free art gallery and museum

inside the library, see the ballroom where The Beatles once played, and walk around Marine Lake, the only saltwater lake in North Wales. Here, steam enthusiasts can also hop aboard a vintage locomotive and ride the oldest miniature railway in Britain, afterwards exploring the hands-on museum.

For family fun there's the Drift Park, with garden, play area, mini golf course, open-air theatre, skatepark and paddling pool complete with water jets. Nature lovers will enjoy the Seaquarium, Horton's Nose nature reserve and walks along the

three miles of golden sands.

Nearby in Prestatyn is the start of Offa's Dyke Path National Trail.

Further afield

If you've packed your folding bike, you can cycle alongside the River Clwyd, enjoy sea views from National Cycle Route 5, or visit one of the nearby towns. Three miles south of Rhyl is the medieval town of Rhuddlan with its castle built by Edward I and 700-year-old church. It was here that Edward laid down the law for the next 250 years and presented his baby son to Welsh nobility as the first English 'Prince of Wales'. Nearby in Bodelwyddan is the 'Marble Church' with its 62m tower, a masterpiece of the Victorian Gothic Revival. Outside are rows of pristine white graves containing the remains of over 80 Canadian First World War soldiers. After the war the soldiers were confined at Kinmel Camp while waiting for a ship to take them home. Many succumbed to the Spanish flu pandemic, but five lost their lives needlessly in a riot over food.

Six miles from Rhyl, St Asaph has the smallest ancient cathedral in Britain, but has a big history. It was founded by the Normans in the 12th century, damaged by Edward I, burned by Owain Glyndwr and used as a stable by Roundheads during the Civil War. It's also home to a real treasure – a 16th century William Morgan bible, the very first to be translated into Welsh, helping to preserve one of Europe's oldest languages.

Set on a rocky hill with views across the Vale of Clwyd, the historic town of Denbigh has more listed buildings than any other town in Wales, and is crowned by the great walled garrison of Edward I and the ruins of his castle.



The Harbour Hub Café

to pontoon to pick up our passengers. We'd prefer leisure boats to stick to the other side.

'I've been sailing around Rhyl for 48 years and Simon's been out with me here since he was two years old. In fact, there's a picture of me in Rhyl Harbour on the front cover of PBO in the early '70s – the boat was called *Dolphin*.

'There are a few good places

to eat around here. The Crossroads café opens at 8am – they do a decent breakfast, and the Spot On café, over the bridge in the industrial estate, opens at 6am in the summer. The Harbour Hub café is good, too. For lunch, I like Mike's Chippy, and for dinner you can do 'all-you-can-eat' for £9.50 at Bombay Buffet.'

Watery graves

■ In 1906, the three-masted Canadian cargo ship *The City of Ottawa* was abandoned in Rhyl Harbour after sustaining storm damage. Its timbers constitute the biggest remains of any Canadian ship of its kind, and Ottawa City Council requested they be returned. However, while funding was secured for a survey of the wreck in 2008, it was deemed too costly to raise. Sea defence work in 2011 was carried out around the wreck, and it remains on a sandbar to this day, visible at low tide.

■ Opposite Rhyl's aquarium is a memorial to six lifeboat crew who drowned when their boat the *Gwylan-y-Mor* capsized in 1853, less than a mile from the shore.

■ The wreck of *Resurgam*, one of the world's earliest powered submarines, was discovered five miles offshore by a diver in 1995. Built in Birkenhead in 1879, this steam-powered submersible sank while under tow for Portsmouth. Its name – Latin for 'I shall rise again' – has sadly not proved prophetic.

■ In 1939, the Royal Navy's worst peacetime tragedy took place in Liverpool Bay, just 12 miles off the Great Orme. Ninety-nine men lost their lives when submarine HMS *Thetis* flooded during sea trials and became trapped on the seabed. A botched rescue attempt and poor conditions led to the suffocation of the men, whose bodies were not recovered for another four months, after World War II had broken out.

CHARTS & PILOT BOOK

■ Admiralty chart 1464
Menai Strait

■ Admiralty chart 1463
Conwy Bay and approaches

■ Imray chart C52 Cardigan Bay
to Liverpool

■ *Cruising Anglesey and Adjoining Waters* by Ralph Morris, published by Imray



Over to you, Maestro



Stu Davies bought an oily Perkins Prima lump from an old Austin Rover Maestro to use as a spare engine for his boat: here, he explains his reasoning and carries out a timely strip-down and rebuild

My Bénéteau Océanis 381 *Sacha*, like other, similar boats of its age, was fitted with the Volvo Penta MD22L, a 50hp diesel engine. This, and its derivatives – the TMD22 and TAMD22 – were based on the Perkins Prima engine, which was developed for British Leyland's Maestro and Montego cars. It was also fitted to the LDV 200 van.

The important factor for us is that most of the spares for these vehicle engines fit our boat engines. They are a lot cheaper than VP parts! The LDV 200 van engine in particular is closest to ours, with the freshwater pump and in some respects the starter motor being the same. The difference is that VP used a cable battery negative return, ie the block isn't connected electrically, so earthing for the starter and alternator is achieved by separate cables. The glow plugs utilise a strange system: they are earthed through the

block, so there is a relay in the system that temporarily earths the block while the glow plugs are used! The relays and control box for this can usually be seen on the aft port side of the engine. In an emergency, I suspect that an (early model) LDV 200 van starter etc could be pressed into use, but some serious temporary wiring would have to be done.

The compression ratios were subtly different in the various forms of engines, ranging from 17:1 (MD22L) to 17.5:1 (TAMD22) and 18:1 (MD22P and TMD22). The compression ratio on the Maestro turbo is 18:1: mine is 17:1, not enough difference for me to worry about.

The injector pump is a basic Bosch EPVE. (The Bosch VE has been fitted to millions of vehicle engines, so it is familiar to most injector and pump service shops.) The injectors are the single-injection kind, known to all injector workshops and simple to test and service.

The cylinder head was the first thing to come off

Sourcing an engine

Vehicle spares, as I have said, are a lot cheaper than VP spares, and over the years I have taken advantage of that fact to service my engine cheaply and also to write articles on which parts fit, where to find them and how to fit them. *Sacha* is now 16 years old, and so is the engine. Consequently, the vehicle spares are getting harder to find. (How many Montegos and Maestros do you see on the road nowadays?)

I knew from the green paint on my engine fasteners that it had never been apart: and while it was still going as well as ever, at some point a rebuild would be required. While engine parts are still available at a reasonable price, I decided to look for a second-hand Prima engine so that I could rebuild the basic block and cylinder head as



Once I had got the head off, I could see that there was some light corrosion on the cylinder walls



By undoing the 10mm socket bolts, the upper half of the cam carrier comes off... revealing the camshaft (below)



a standby. A few years ago, second-hand Maestro or Montego engines were easy to find on eBay. They were sought after by off-road Land Rover enthusiasts because they were so cheap, fuel-efficient and reliable. (The Prima was a surprise to everyone when it first came out. With its direct injection system, with the combustion space in the piston, it rapidly became a favourite of the fleet managers of the day. It actually came close to saving British Leyland: a pity about the styling and rustproofing of the cars!) However, I digress. Nowadays, finding a second-hand example is more difficult.

I tried looking on eBay for weeks: some real dogs came along, and a complete van at one point, but none of the offerings were good enough. Then I struck gold: a turbo Maestro engine turned up in a scrapyard at Bagillt, not too far away from me. I went to have a look. It had been described as a low-mileage example that had been driven from Caernarfon, and it turned over – just! The fact that it was a turbo wasn't a problem: the only difference was in the injector pump and a slight change in the compression ratio. I took a punt on it, and £150



It's important to line up the valve buckets in a numbered row

changed hands. It was a rusting, oily mess, but it had the same injectors that were fitted to my engine (not all of them are, with some having the later dual injection point ones), plus a turbo that I could flog on eBay to help defray my costs. I got it home with the help of a friend and his sturdy trailer. I had forgotten how heavy the older diesels are!

During my search for spares I also discovered www.parts4engines.co.uk, based in Birmingham: the proprietor is a yachting enthusiast, and sources spares for the older VP and Perkins engines. Where they can, they are actually getting parts such as gasket sets and bearings made, plus water pumps for the MD22 if there is enough demand. Check out the website: there are lots of bits for our engines there.



I used my trusty valve spring compressor to compress the valve springs one by one

Cylinder head removal

I started the job by stripping off all the vehicle stuff. It was interesting to note that at the back of the engine, where our raw water pump is, they used the take-off for the power steering pump – and there was a thing driven by the camshaft that I found out was a vacuum pump for the brakes on the car. There is no vacuum on the manifold of an open throttle diesel: I hadn't thought of that!

The cylinder head was the first thing to come off. It was made of aluminium, another innovation from the design team, and consequently the head bolts were very tight. They were 15mm across flats, an unusual size. (I had found reference to them on a Maestro forum: six-point sockets are preferable to use, the ordinary ones break.) I have a 2ft, ½in drive breaker bar in my toolkit, and it took my 15 stone bouncing on the bar to get the bolts undone. There was no corrosion, they were just tight! The torque for reassembling is 90Nm plus a quarter of a turn, done up in stages. (The manual is available online: Google is your friend.)

Once I had got the head off I could see that there was some light corrosion on the cylinder walls from where the engine had been standing, but nothing too serious. The overhead cam is integral in the cylinder head, and by undoing the 10mm socket bolts the upper half of the cam carrier comes off: the cam can then be removed, giving access to the valve buckets. I used a magnet to lift these out, exposing the valves and springs. The important bit here is to line them in

a numbered row, then the valve clearance adjusting shims can be lifted out of their recess on the valve stem and kept with their buckets. This is important, because otherwise reassembly becomes a nightmare, with the clearances all messed up.

I used my trusty valve spring compressor to compress the valve springs one by one, so as to wriggle out the collets.

■ **TOP TIP:** I use a socket that is a touch bigger than the valve collets and stem, and place it on the top of the valve, with the valves and head flat on the bench so the valve can't move, and give it a tap with a hammer. This action loosens the collets, which jam because they are tapered, and makes using the compressor easier.

I put the valves with their respective buckets and didn't mix them up. They were only lightly begrimed with carbon, but needed a bit of work and a light grinding. There was no play in the stems, but I wanted to change the stem seals.

Other stuff comes off

While the engine was loose on the floor I also undid the main front pulley bolt and the flywheel bolts. The front pulley is 24mm and very tight. I wasn't going to use the injector pump, cam belt or any of the ancillary bits, so I didn't bother with timing marks etc while I disassembled it. I put two 6mm bolts through the injector pump pulley into its locking threads and used them to lock the engine while I bounced on the breaker bar. The flywheel bolts were relatively easy to undo.

I then removed the rest of the bits such as the injector pump and mount, engine mounts, oil filler and flywheel housing backing plate. This is where the car engine differs, with a dissimilar housing and the starter motor on the opposite side to ours.



This is the flywheel end of the engine: the belt you can see is the old steering pump belt



It took a combination of freeing oil and heat from my propane gun to free the injectors

Injectors and glow plugs

The next job was to remove the injectors and the glow plugs. They were also tight! The injectors are held in place by a single bolt and sprung rectangular washers: easy to undo, but the combination of an aluminium head, stainless shim spacer and steel injector is a recipe for corrosion, especially as they faced the front of the car and the weather.

I took out the clamp bolts and clamps. There were two flats on the body of the injector and I used a large adjustable spanner on these to try twisting them. It took a combination of freeing oil, heat from my propane gun, brute force and perseverance to get them to move: the car was from the mid-1990s, and hadn't ever had a spanner on the engine! Eventually they came loose and were removed. There's a copper sealing washer on the bottom of the injectors: these sometimes come out with the injector, but sometimes stick. In this instance, two did – but I knew how to get them out. I took an 8mm threaded bolt, ground a small taper on the end and screwed it a couple of turns into the washer down the hole, and wiggled. Out they came on the end of the bolt.



I also cleaned up the injector sleeves with a piece of broom pole

The glow plugs were the same, stainless in aluminium – yuk! They have an 8mm spanner head. I heated the head around them and used lashings of freeing oil, working them to and fro until they finally came out. I then took a straight rotary wire brush and de-coked the head and valve pockets. I also cleaned up the injector sleeves with a piece of broom pole and some abrasive cloth. I found that a Scotch pad cloth was superb for cleaning up the metal surfaces and piston tops.

I spun the valves in my drill and



The glow plug looks like this



Removing the glow plug



I gave the valves a light grind with smooth grinding paste and a valve-grinding sucker

used the Scotch pad to clean them up, then gave them a light grind with smooth grinding paste and a valve-grinding sucker. All it took, literally, was a few turns of the grinding tool to get a nice, matt, full-width seat.

I then washed the whole head down in a bath of kerosene.

The valve stem seals are shaped like a top hat, with the brim used as the base for the valve spring and the middle bit tight on the valve guide. The earlier engines used a simple seal which only gripped the valve guide and could slip off. They usually come with the head gasket set, but care must be taken that the right ones come with the set: they are nearly a fiver each if bought separately! The website www.parts4engines.co.uk sells a head gasket set including both types for £33.

Reassembly

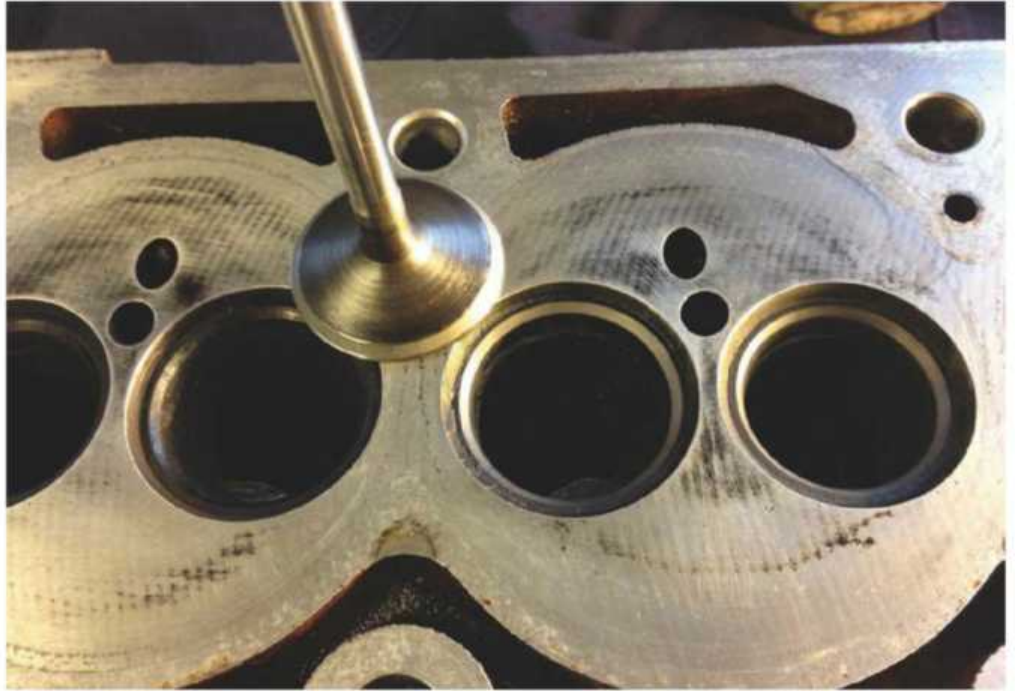
Assembly is the reverse of the taking-apart process, with lashings of engine oil, and I used a blob of grease on the collets to hold one in while getting the other in place. A quick tap on the top of the valve with a hammer beds in the collets. The cam bears directly on the head and cam carrier cover, with a steel half-moon that locates the cam longitudinally. The valve clearance has to be checked with the cam in place. VP sell special tools for the purpose, but I just got some 8mm bolts, nuts and washers and drilled a steel bar to suit so that I could put the bar across the bearings to clamp the cam in place and check the clearances.

Basically, the way the cams are cut, it is possible to check two at the same time. I put two bases next to the valve buckets for checking, pushed my feeler gauges in and found them to be within tolerance.

Intake: 0.20-0.40mm (1mm = 0.040in approx, so 0.008in-0.016in).
Ex: 0.35-0.50mm (0.014in-0.020in).

Then I slackened the clamps off, turned the cam to the next two and continued checking. I was lucky, because it had only taken the lightest of grinds to optimise the seats: the clearances hadn't gone out of spec. Phew! The thought of trying to find valve biscuits for an engine this old filled me with horror.

There are seals at both ends of the



TOP Valve seats after grinding, showing a full-width matt finish

ABOVE A valve clearance 'biscuit' is used to adjust clearances

RIGHT The front cam carrier bearing surface

cam that come with the head set, so I placed them near enough into position while I assembled it. The handbook recommends a 2mm bead of silicone on the joint of the cam carrier, so a good clean-up and gasket goo got it all together. Thereafter, I needed to get the seals on the end of the cam into final position: I used a 6mm bolt and gently tapped them both home.

One other job that needed doing was fabricating a blanking plate out of 6mm aluminium to cover the space in the cam carrier left by the vacuum pump that we don't use in our engines.

The glow plugs were tested with a battery and a couple of wires: they are notoriously difficult to check with a meter, with internal shorts giving strange readings. Only one warmed up, but as this engine is going to be stored I decided to use them as blanks until they are needed. They are standard, generic plugs, so there's no fear of not being able to source them in the future.

The injectors looked good after I cleaned them externally with a brass wire brush. I set up the injector pump in the vice with a fuel feed from a plastic bottle, applied some power to the

shut-off solenoid (don't forget, in this case the solenoid works the opposite way: power on to start rather than power on to shut down), attached an injector to a pipe and span the pump by hand. I could feel the resistance build as the air bled out of the system, then bingo, creak and squirt, they all worked ok.

However, I didn't know if they were 'breaking' at the correct pressure, so I phoned Dr Diesel Fuel Injection Services in Oswestry. The 'doctor' said: 'Bring them in, I will check them for a tenner, while you wait'. What a star: a proper old-fashioned workshop, all the tackle and a nice bloke with it. He put them on the tester and flushed them while checking them. They were spot-on, so they're ready to go. I am tempted to take them out to the boat in Portugal and change them as a matter of course, bring the old ones back and let Dr Diesel work his magic on them.

So, after all this work, the top end is good to go: ready to be used or as a spare in storage.

NEXT MONTH
Renovating the block and reassembling the engine

Keel crack repair

STEP
BY
STEP

Faced with a split in the front of the keel on his Albin Ballard, Mark Ryan decides on a course of redemptive action and cracks into it

BEFORE

RIGHT This was the crack in the front of the keel of Mark Ryan's Albin Ballard



AFTER

BELOW The completed repair, with an application of Coppercoat. The keel is now stronger than it ever was



My Albin Ballard Triola suffered from a mast truss problem that led to the truss expanding and splitting the front of my keel open, with water subsequently seeping into the bilges.

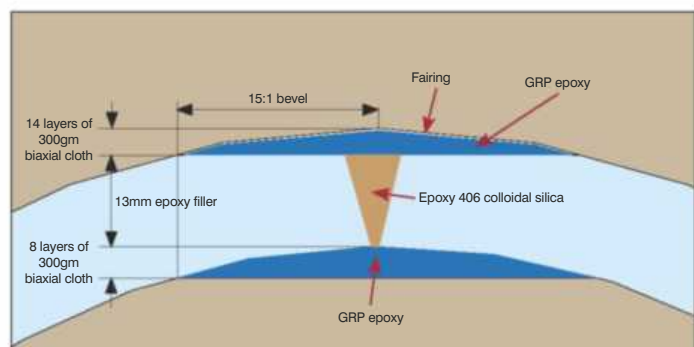
The first thing you need to do with any 'hole' or split in your boat is to figure out exactly what caused the split and remedy that first – or else any fix you do will likely be short-lived, and the problem will just occur again. My solution for dealing with the cause of the split was removing the old truss, fixing the crack and finally replacing the truss entirely. So, how to fix that crack...

The ideal repair

I had repaired glassfibre before, and knew that the ideal repair would have to attain a 12:1 bevel. Needless to say, the hull in this area is reasonably thick at 2cm, so a repair bevel would be a whopping 24cm radius from its centre: at its widest, it would be well north of 50cm diameter wide.

Terror descended at this point, so I phoned Wessex Resins and they suggested the bevel could do with being larger than 12:1 in this area: however, I didn't need to bevel the whole 2cm depth.

With my repair design decided upon, I got to work fixing the crack in my beautiful Ballard.



This is the final design that we agreed would do the job

Materials required for the job

I spoke at length with David Johnson of Wessex Resins, who spent a great deal of time guiding me on the repair and choosing the correct materials for the job. (You can source all of these from East Coast Fibreglass Supplies.)

- WEST SYSTEM epoxy, not polyester resin. Epoxy may be five times more expensive, but it's also five times stronger than polyester resin. Perhaps more importantly, though, it has far better secondary bonding characteristics (its ability to 'stick' to something else), so your repair will be less likely to drop out!
- WEST SYSTEM 402 milled glassfibre 'choppies'.
- WEST SYSTEM 406 colloidal silica.
- Acetone.

- Peel ply. David put me on to this stuff. It is the best favour you can do for yourself – and I'll explain why later.
- Polyester release film (optional).
- Light, 300gm biaxial cloth. You will need several layers of this, but it will go 'around' corners better and will shape to this complex area. Don't be tempted by more exotic materials like carbon fibre (unless you have a degree in composites engineering) to repair your glassfibre boat.

Glassfibre reinforced with high-quality epoxy has an elongation to break in excess of 4%: carbon fibre has limited elongation and thus is not as sympathetic to your boat's existing structure, and stands more chance of breaking away.

- Cardboard for templating your 'fix' area.
- Good-quality glassfibre shears.
- Mixing pots, sticks and disposable paintbrushes.
- A small consolidation roller.

- Cobalt drill bits (HSS will certainly do).
- A drill.
- Ideally, a multi-tool like the Fein multi-tool with a diamond cutter.
- A grinder with a coarse sanding disc.
- PPE, loads of PPE. Disposable overalls, gloves, a good respirator, ear and eye protection. You may look like something out of *Breaking Bad*, but you will be thankful to not be itching for a week after grinding away at your boat.

1: Drilling out the crack

In order to repair that tiny crack, we needed to drill it out. The best method, to ensure we didn't spread the crack, was to drill a hole at either end. (Do bear in mind that what you can see on the outside of the hull may be the 'thin end of the wedge', and the crack may extend further inside the boat.)

I then drilled holes along the crack, checking the angle

carefully and where the holes terminated inside the boat to make sure I was drilling straight and true in line with the crack. In this instance that was quite easy, as the boat was cracked along her centreline. I used my Fein with its diamond disc to 'join the dots' and tidy the opened-up crack. The important thing is ensuring you go far enough to find good, solid GRP that has not been compromised.



A hole was drilled at either end...



...and I then drilled holes along the crack



The drill holes were joined up with the Fein multi-tool and its diamond disc cutter (below)



Exploring the extent of the damaged GRP around the crack

2: Bevelling out the edges

Once I had confirmed the extent of the crack, I measured out the 15:1 bevel and marked it with a marker pen.

Creating a bevel on a flat surface is relatively easy to do by eye, but creating a bevel in an area like this is pretty damn tricky! In order to ascertain how far I needed to grind back, I cut out some cardboard templates of the area and marked on them exactly how far I would need to grind back.

With this done, you can get suited up in your PPE, tape up your cuffs, get your grinder out and carefully grind back your bevel. This is an alarming job: go slowly and carefully, checking often with your template. Once you are done, you will be left with a nice tidy hole and a nice tidy bevel ready to be filled and glassed over.



A cardboard template was used to calculate the bevelling



Depth graduations were marked on the template



The opened-up crack with bevel

3: Filling the crack

The crack was to be filled with a mixture of epoxy, milled glassfibre (402 filler) to criss-cross the area and colloidal silica (406 filler) to give the mixture the thickness it needed to 'stick' in the hole.

Firstly, the hole was fully cleaned with acetone, then the inside of the crack was abraded with 80-grit paper just to be sure there was a really good key in there to which the epoxy could adhere. I placed a rectangle of polyester release film on the inside of the boat, taped it down and then weighed it down with a couple of out-of-date Reeds Nautical Almanacs (one of their many uses!) to stop the filler mixture escaping into the inside of the boat.

The hole was wetted out with unthickened epoxy to give the thickened mix a good base for gripping. We were now ready to



Copious amounts of epoxy were used in the repair

mix up the filler and would use a plastic spreader to work it into the crack, ensuring it made contact with all sides of the crack and left no voids.



THE CRACK IS FILLED! If I'd had my head screwed on at this point, I would have put peel ply over the top of the crack fill – which is something Wessex Resins suggested after I had completed this stage of the process. Peel ply would have meant no amine blush (a waxy coating that needs to be washed off with water before the next stage of the process) would be produced and it would not have needed to be sanded.

4: Glass-up the bevel

As a rule of thumb (a useful tip from the chaps at East Coast Fibreglass Supplies), for every 1mm of finished thickness you will need approximately two layers of 300g biaxial cloth.

We needed to build up 7mm, so now we needed to employ some simple maths. 7mm was 14 layers of our light 300gm cloth, so we needed to divide that by the diameter of our bevel and cut

out the cloth accordingly. I used another cardboard template and counted on being able to stretch my cloth around the awkward three-dimensional shape of the front of the keel. This is the reason I always use light cloth: it may require more layers, but it is more forgiving on these complex shapes. I then marked each of my 14 layers on the cardboard template, and used this to cut out my glassfibre with my shears.



The template placed over the keel



The cardboard template, appropriately marked up



Layers of glass were cut to the template

The whole area of the repair was washed with water and a scourer to remove the amine blush from the previous fill: this is important, as amine blush can affect the bond of the glassfibre to the substrate. It was then cleaned with acetone before a final rub-down with 80-grit paper. (Note: wash the surface first, and rub down second. This is to avoid sanding any contaminant into the GRP.) We were now in a position to start glassing in the hole!

First, we thickened a small amount of epoxy with colloidal silica to use as the 'base' for the first layer of GRP. This

ensured any small voids in the existing polyester were filled and gave a good base for our first layer of glassfibre. (You should always start with the largest layer of glass.)

If doing this job yourself, apply each layer, wetting it out fully by 'stippling' with the brush (do not try and 'paint' with the brush as you will just pull the glassfibre around), and use the consolidation roller between every other layer. Work fast and only mix up as much epoxy as you can apply within around 10 minutes before it 'gels'. Don't try to apply more than 14 or 15 layers of light glass in one go



All layers of glass applied, with peel ply on top

as epoxy is exothermic, and if enough epoxy is present it will create a chemical chain reaction where the epoxy will heat up, which will speed the curing process, which will then create more heat and so on! If your epoxy exotherms it will become very brittle indeed – not to mention the fact that it can catch fire and give off toxic fumes – so it is to be avoided.

If you need to make thicker GRP, work in stages by putting peel ply on top of say, the 15th layer, let it cure overnight, remove the peel ply and continue laying up.

Finally, apply the peel ply over the top: make sure the peel ply is oversized so you will have a corner to grab once the epoxy has gone off. Use a spreader to squeegee as much resin out as you can: the less epoxy there is in the GRP, so long as its all wetted

out, the stronger your final fix will be. In reality, in a complicated area like this you won't want to work it too much as it is important to get the shape back.

Fairing the hull

At this point, the repair wasn't quite completed. I hoped I had done a good enough job that I could put my Coppercoat straight over the top of the GRP, but after pulling off the peel ply and sanding it down, small bubbles and finger depressions were apparent that would need filling.

Once this was completed, I patched up the Coppercoat: you get very good at accurately measuring small batches of the stuff for this process, and a helpful tip is to get some good digital scales. The keel is now stronger than it ever was.



Some small voids needed filling before antifouling

INSIDE THE TRUSS CAVITY

Glassing up the inside

On inspecting the inside of the truss cavity, it was apparent that the crack extended above and below the area where it was visible on the outside. Before I could glass up the inside, this had to be ground out back to good glassfibre.

I filled the ground-out sections with the same mixture (colloidal silica, milled glassfibre and epoxy) as I used to fill the crack in the hull. Finally, I was ready to glass up the inside of the hull. It was even more important for me to do this as I had been chipping away at a resin block that encapsulated my mast truss, leaving the whole area slightly suspect: polyester resin is very brittle and susceptible to impact forces, as a microscopic process called micro-fracturing can occur. Therefore, I painstakingly tailored eight layers of glassfibre to fit the area inside the hull.

Once again, the surface was cleaned thoroughly with acetone and given a base of thickened epoxy to create fillets around any sharp corners and fill in any voids before the first layer of glassfibre went down. This time, I actually used 404 high-density filler rather



The extent of the bow crack: the ground-out sections are shown in yellow

than 406 colloidal silica as my truss would eventually sit on top of this glassfibre, so compressive strength was a priority. I finished off with peel ply once again to make the next stage of the process easier and avoid any need to wash off amine blush, and to leave a keyed surface for the next process. Finally, as with any structural work I undertake to *Triola*, I had my good friend and marine surveyor, Alf Cackett, come and survey the repair and write it up for my insurance company. Phew, job done!



The end result: all glassed in, with peel ply on top

ABOUT THE AUTHOR



Mark Ryan, an IT manager for Mortgages for Business, has sailed all his life from the River Medway and now cruises with his wife Elizabeth, two children (Sophie, aged 1, and Thomas, aged 3) and seadog puppy Patch on his 9m (30ft) 1970s Albin Ballad, *Triola*.



Retro-fitting spring cleats

Frustrated by a shortfall of spring cleats on his Jeanneau Sun Odyssey 32, Bob Goode decided to remedy the situation

I have long bemoaned the lack of spring cleats on our Sun Odyssey 32, especially when rafted deep in places like Guernsey where you quickly run out of places to hang a line.

However, as access to the underside of the deck is excellent on the SO 32, the solution is within the abilities of even the most ham-fisted DIYer. In fact, the greatest impediment proved to be finding cleats to match the original Jeanneau ones at a reasonable price. Accastillage Diffusion in Cherbourg offered the solution at €42 each (about £30 at the time).

The location was selected with two points in mind: firstly, the most useful position on deck, and secondly, keeping the backing pads unobtrusive below decks. The chosen spot fell within the heads on the port side, where a fabric headlining would cover a large part of the backing pad, and just forward of the galley

bulkhead on the starboard side, where they would be under a headlining panel behind the chart plotter and radar displays.

The deck moulding is cored for the most part and reinforced in high-stress areas such as the mounting points for deck hardware. However, the outer edges are solid laminate and sit bonded on the hull moulding, through which they are bolted to the toerail.

Genoa track bolts

There is a narrow zone of single-thickness laminate between the double thickness of the hull-deck joint and the cored part of the deck, which is further inboard. My plan was to run the bolts through in this zone to avoid any possibility of disturbing the coring and risk of water ingress.

As the genoa track bolts were visible from both above and below deck, I used these as a datum for



The finished cleat. Note how it is positioned and the point of maximum beam, avoiding snags on the genoa sheet

measuring where to drill the holes. A 1.5mm pilot hole was first drilled in the measured position and a needle inserted so that alignment could be checked and any necessary adjustment made before taking the plunge with an 8mm drill. Any small misalignment would fall beneath the cleat base and so be both sealed and invisible.

Once the first 8mm hole was opened the cleat was dry-bolted into place and used to align the

second hole for drilling. The backing plate was made from 5mm-thick stainless steel, polished on one side as part of this would be visible in the heads. C & B Marine made these for me for a quite reasonable fee. After this, it was simply a matter of applying a generous layer of sealant and lightly tightening the nuts. The sealant was left to cure overnight before a final tighten with a spanner and, bingo – job done.

Now to find a raft to join!

HERE'S HOW I DID IT...



Drilling the 1.5mm pilot hole after locating the ideal position using the genoa track fixings, which are visible below decks. The old dodge of using masking tape to stop the drill slipping will not work as the deck is non-slip at this location



The first bolt coming through the solid fibreglass between the hull-deck joint (on the left of the photo) and the cored section of the deck, just to the left of the wooden lining



The cleat is dry-bolted into place, using the first hole to line up the second hole for drilling

Dedicated fans, all winter long

This is how I achieve winter ventilation on my Westerly Centaur – with the use of two computer CPU fans, a winter weatherboard and the solar panel that normally charges the batteries.

The fans are wired directly to the solar panel, so they are activated when the sun shines, and are off when it doesn't. The cost was £2 for the fans from eBay, plus a piece of scrap ply!

I am thinking of making this a permanent fixture for the summer season: I would have to cut holes in the main washboard and fit louvre vents to stop rain ingress, with a quick-release plug for the power leads.

Ray Smith
Carmarthen



Loose locker lids? Strut right this way

One of my pet hates always occurs when a well-meaning crew member leaves a locker lid open, and it comes crashing down on the next roll of the boat with a gelcoat-shattering crunch. Sailing with children has also heightened my awareness of boat safety: one of these days someone's little fingers will be in the way as they reach into the locker for a fender, and as usual it will be all my fault.

To this end, when fitting my new kitchen over the winter, the gas struts that keep the vertically-opening doors in place gave me an idea. I have obviously noticed gas struts used on everything from car hatchbacks to engine bays on huge motorboats, but for some reason I had always thought of them

COST AROUND £4



as expensive. This is not the case: a bit of online research yielded a 250mm gas strut, available in a variety of strengths from 50-150 Newtons (5-15kg). The strut is supplied with a number of optional brackets, with ball and socket joints to aid alignment when fitting. One strut with fixings, including delivery, costs £1.99.

The only additional parts I needed were an aluminium plate to spread the stress on the hatch lid and a small hardwood block, glued to the inside of the locker, to support the other end of the strut. The job can be completed in a few hours with simple hand tools and parts from the 'that will come in handy, one day' box.

I realise that the strut isn't manufactured from marine-grade 316 stainless steel, and that the salty environment will eventually take its toll on the metal components: but at £1.99 each I can afford to replace them every season if needed.

Tim Marsden
Nantwich, Cheshire



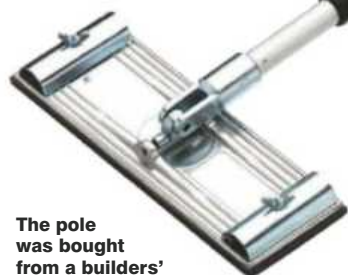
Pole position confers a distinct advantage

I had been looking for an easier method of sanding off antifouling before applying a new coat.

My usual method of wet-and-dry sandpaper on a sanding block is a guaranteed way of getting wet and dirty, particularly as water always runs down your sleeve. So, I sourced a decorator's aluminium sanding pole from a local builders' merchant: the pole extends from 1.3 to 1.8m and has a flat head with clamps on a joint. I then went online and found sanding mesh: this is much more robust than wet-and-dry paper and comes in a 5m roll, which will last for some years.

In use, I've found this method much more comfortable. I can reach the underside of the hull without grovelling around too much, and the pole also keeps one away from any residual dust. A bucket of water provides an easy way to dunk the head of the pole to rinse off the mesh. I hope others may find this useful! Total cost was about £35.

Gary Miller
Ivybridge, Devon



The pole was bought from a builders' merchant



The sanding mesh is more robust than wet-and-dry sandpaper

COST £35

A day I'll never remember

Gilbert Park and his wife were en route from Douarnenez to Audierne when Gilbert succumbed to an episode of transient global amnesia...

My wife and I decided to explore Brittany last summer while moving our new acquisition, a Sabreline 36, from Newark to Aigues-Mortes in France. We chickened out of the long trip from mid-Biscay around Gibraltar and up to Le Grau-du-Roi, so the last part from La Rochelle to Port Camargue was planned to be by lorry.

The weather that summer was awful most of the time, or so it seemed. After spending almost a week in the inner harbour in Douarnenez waiting for the Force 9 winds and heavy rains to stop, there was a window of almost calm weather (my definition – not the crew's) to leave and continue south.

The day before leaving, I carefully planned our trip to Audierne, round Pointe du Raz, marking the various waypoints on the chart. I had a long chat with the helpful Welsh lady harbour master who told me where the deep water was in the harbour, and what areas to avoid, and I then fully apprised my wife of all the passage details.

The sun was shining when we left, and the sea was calm. As we progressed along the coast the sea state worsened, becoming a little rough but not too bad; and opposite Pointe de Lesven I took the opportunity to leave the flybridge and visit the heads below. I remember coming back up to the flybridge, and... that's it, until I found myself in an ambulance!

My wife tells me I behaved quite normally, cheering her up as the sea got



rougher around Pointe du Raz (which was a part of the trip I had always looked forward to). She didn't know anything was wrong

until we were outside the harbour entrance. There, I spent an hour going between the two cardinal markers and kept asking her where we were: she would reply, and I would immediately ask the same question. She quickly understood that something was wrong and tried to get me to let her helm the boat, with little success. She eventually succeeded by handing me the radio and letting me think I was having a stroke, and that we needed help.

My training kicked in and I realised that I needed to send a pan-pan, which I did – mostly in French. The coastguard wanted to know where we were, so I asked my wife: I couldn't remember the answer, so I couldn't tell him. He then asked me for my lat and long and, once again, my training kicked in and I read it off the chart plotter. He was surprised that we were in the harbour.

I told him I was having a stroke and that my wife couldn't dock the boat: in fact, she could, but not without worrying that she would damage either our boat or somebody else's – or both! Three customs officers in a RIB heard the pan-pan and

put the captain on board with another officer. The harbour master also heard it, was ready to take the warps from the boat and had a doctor on the telephone.

When the boat was secured I was taken off by the fire brigade and passed over to the paramedics, who took me – and my wife – to the hospital at Douarnenez. From there, I was later transferred to the regional neurological unit at Quimper.

I kept asking my wife the same question, over and over again

The neurologist explained that my memory loss, and repeatedly asking the same question, were classic symptoms of

transient global amnesia. This is like a brain reset, although the cause is not known, and it results in an inability to form new memories – in my case, for about 12 hours. Fortunately, it happens only once and there are no long-term effects. In particular, there is no need to stop driving cars, let alone boats, and I can't even use it as an excuse to forget presents for birthdays and anniversaries. The only lasting effects are that I will never remember going around Pointe du Raz, and my wife will always be a bit worried when I forget things.



ABOUT THE AUTHOR



Gilbert Park has been sailing for more than 40 years and has worked his way through almost the entire Drascombe range. He now has a Sabreline 36 motor cruiser and enjoys the tinkering and maintenance that goes with owning any sort of boat.

Send us
your real-life
experience
– and win a
painting of
your boat!*



Yankee Lady moored safely in the sunshine at Audierne Harbour

Special thanks go to the staff at Audierne Harbour, who secured the boat and rang me to say it was all secure and safe. Thanks also to Alain Bossenac from the mayor's office, who collected my wife from the hospital at 2200 and brought her back to the boat for the night. Also, I shouldn't forget my wife – even though I did that for 12 hours – who told me what happened and looked after me.

LESSONS LEARNED

1 My wife has to learn to dock the boat without worrying that she will destroy it: next time there may not be any customs officers around. To help with this, we fitted a stern thruster (we already have a bow thruster).

2 Sending a pan-pan in French was the right thing to do: although the coastguard may have understood English, the customs officers didn't. I will in future have crib cards for Mayday and pan-pan in the language for the country I am in. If it's a language I don't speak, the last sentence will be 'please respond in English: I don't understand...'

3 Sending a pan-pan worked well. There is a strong case, however, for sending a Mayday. If I *had* been having a stroke, a Mayday would have been more appropriate, because there is a limited time to get the right treatment.

4 I was able to use my training, even though I couldn't remember new events. Fortunately, this is stored in a different part of my memory: every penny of the RYA radio course was worth it on that day.

5 We need to make sure we both have the ICC certificates, so if I am incapacitated my wife can 'legally' helm the boat.

6 Writing the passage plan and pilotage on the chart that then lives on the flybridge during passage meant that all the information was available to my wife when I couldn't remember it. The detailed briefing, especially of the harbour, was invaluable.

7 Passport, EEC cards and travel insurance documents need to be kept in a place known to all. We normally store all our documents near to the grab bag, but because we had been ashore so much they were all in my 'man bag'; a fact I hadn't mentioned. We now both carry copies of our own and each other's documents electronically.

*Send us your boating experience story and if it's published you'll receive the original Dick Everitt-signed watercolour which is printed with the article. You'll find PBO's contact details on page 5.



How to service your cooling system

STEP
BY
STEP

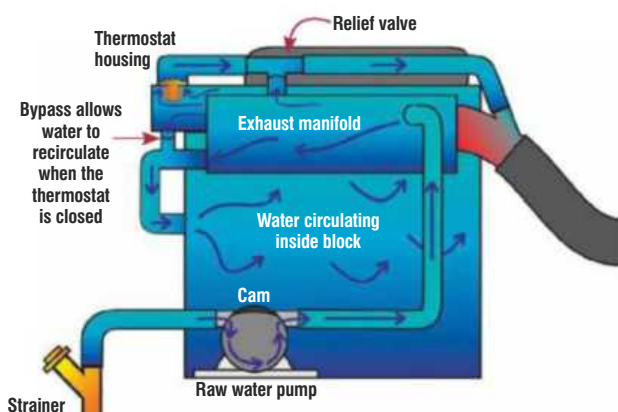
Is your boat's engine beginning to run hotter than normal? It may well be time to service the cooling system, suggests Tony Davies

Engine cooling systems vary in their complexity, beginning with the cheap and nasty direct or raw water cooling systems where sea or river water passes directly through the engine block for cooling purposes.

There is only one advantage to this system, and that is cheapness. It is seldom seen on modern engines, although the Americans still seem to like it on their big V8s. Raw water cooling shortens the engine's life and also significantly reduces engine efficiency as the engine always runs well below its designed running temperature of 80-85°C.



Raw water-cooled engines

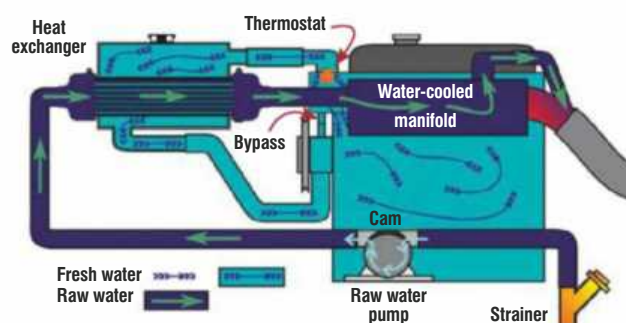


For raw water-cooled engines, the normal recommended running temperature is about 52°C as this cuts down the amount of salts and sediment deposits that cling to the cooling system walls while running. Over a long period the cooling system gradually becomes clogged and engine temperature rises, causing hot spots in the areas where the water can pass through least effectively. Having said all this, thousands of engines

are still running well despite being under-cooled throughout their lives!

There is very little that can be done to prevent silting of the engine block. It is possible to occasionally backflush the engine by removing the hoses and running clean water through the system as this will remove loose debris, and if done regularly from new it does make a difference to the engine cooling passages.

Fresh water cooling systems



The far more efficient indirect or fresh water cooling systems allow engines to run at their correct temperature of around 85°C, and by allowing the introduction of coolant inhibitors and antifreeze into the cooling system provide for long and efficient engine life.

Unfortunately it is not all good news as a regular service regime is required to keep the cooling systems of fresh-water-cooled engines working correctly. This mainly involves cleaning the small tubes in the tube stacks located within the heat exchanger, the engine and gearbox oil coolers –

and also, on more powerful engines, the intercooler that cools the turbo and supercharger charge air before it enters the cylinders. In this latter case, it is not only engine temperature but also engine performance that suffers when the tubes become blocked. Heat exchangers, oil coolers and intercoolers come in many designs, so the method of dismantling prior to cleaning the stacks will vary slightly between engines. The engine featured is a home-marined BMC 1.5 diesel (one of the best little diesels of its time) with less than 500 hours of running.

Clean the heat exchanger

1 The Bowman heat exchanger is combined with the exhaust manifold and includes the header tank. It is an easy job to remove the tube stack for cleaning, so there is no excuse for not doing it every couple of years. Undo the hose clips on the covers at each end of the header tank to free the tube stack, which is secured inside the covers by the smaller clips.



2 Slide the tube stack out of the header tank. It can be removed from either end, whichever is easiest.



3 This tube stack was filled with a gel-like substance, which reminded me to flush the engine block through with clean water.

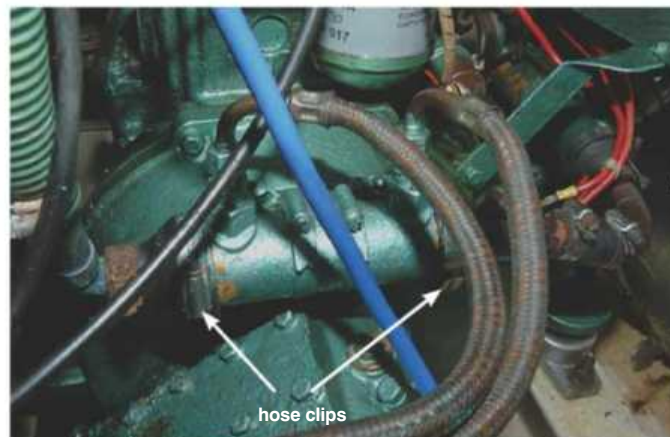


4 An unwound wire coat hanger is an ideal tool for running through the tubes as the spiral section provides a smooth scraping action. It is important to clean each tube individually, and well worth the effort to keep the system flowing freely.



5 Flush the tubes through with clean water and also flush the heat exchanger body to remove any residue from the heat exchanger. Refit the tube stack into the header tank, ensuring that the ends of the stack are located in the small sections of the end covers and that the hose clips are gripping it securely.

Clean the oil cooler



1 The oil coolers are next, and this gearbox oil cooler will need a couple of new hose clips once it has been cleaned!



2 The inlet end of the cooler is the first point of entry after the water strainer, and some weed has clearly bypassed the strainer and is beginning to block the tubes. A few minutes with the wire coat hanger and they will be perfectly clean again.

3 On this engine the oil cooler is hidden behind the raw water pump, which has to be removed to allow the tubes to be cleaned.



4 As the raw water pump cannot be serviced without being removed it has to come off anyway, and the easiest method of removal is to take off the mounting bracket and pump as one unit.

5 This now gives easy access to the engine oil cooler for cleaning.



Cleaning the water pump



1 Once the pump is separated from its bracket it is ready for servicing, which begins with removal of the cover plate. With the screws removed, a light tap will usually suffice to free off the cover plate.



2 With the cover off, the amount of wear on the inside of the cover face can be checked. Where there is excessive wear these covers can often be fitted inside out.



3 Removing the impeller is generally an easy job if you use a proper puller. This is the latest Jabsco Compact puller. If you use screwdriver blades to wrench out the impeller you will definitely damage the impeller and probably also the edges of the pump body, which may prevent the cover from sealing properly when reassembled.



4 In normal circumstances, once the impeller is removed it is checked for damage and wear and then either refitted or replaced. Splits like this indicate an impeller close to failure.



5 Due to the layout of the engine and the impossibility of servicing the pump while in place I carry a complete spare pump on board ready for a quick changeover. In this case it will replace the old pump, which will become the spare once serviced.

6 Once the pipework and pulley are removed from the old pump the new one can be assembled in a few minutes, starting by installing the hose tails into the pump using plumbers' PTFE tape to seal the threads.

TOP TIP

It is not good practice to use right-angled elbows on water systems as they restrict the free flow of water. Sweeping bends give the best flow, but if there is no alternative in a tight installation then they will do the job – and in this case they have not caused any overheating problems!



7 The pulley is fitted next. This must be lined up with the engine crankshaft pulley once the pump is in position, so it is left loosely fitted at this stage.



8 The pump is refitted and the hoses connected. The pulley is lined up with the crankshaft pulley and the securing Allen screw tightened. The drive belts can then be renewed. When fitting a new belt it is sometimes a little on the short side, and the trick to getting it onto the pulleys is to place it round the crankshaft pulley and then push it as far onto the alternator (or pump) pulley as possible. Then, while holding the belt in position, turn the engine over with a spanner on the crankshaft pulley nut and the belt will roll into place. It can then be tensioned in the normal manner.

The quick-change standby



When using a spare pump as the quick-change standby, it is important to be able to remove the hoses quickly and easily. Marine reinforced hose, which is used to avoid collapse under pump suction, hardens over time – and often, the only way to disconnect it is to cut it off and renew it. This is clearly of no use where the pump needs to be changed quickly. On this installation, vehicle hoses are used for the final short connections to the pump as they never harden and are always easy to remove. The main pipe runs are all domestic copper tubes which are cheaper than reinforced hose, and there is no problem with pipework collapse. Where it is essential

to use convoluted hose, it is possible to make up an end connection using a copper tube stub 4 or 5in long, depending on the diameter of the hose, in the appropriate size to fit inside the hose. The end of the convoluted hose is warmed slightly in hot water to soften it and the copper tube is secured halfway into the tube with two hose clips for a permanent fix. Then, use a 4in length of vehicle hose on the exposed end of the copper, again secured with two hose clips. This hose is used to make the final connection onto the pump with a single hose clip and ensures it can be fitted and removed very easily while still providing a reliable seal every time.

Check the thermostat

Thermostats are often forgotten but they can eventually go wrong, and usually in the closed position – which means the engine overheats quite quickly. Less serious is when they fail in the open position, as in this case the engine simply never reaches its correct operating temperature. The quickest cure for a closed thermostat when away from home is to simply remove it and fit a replacement at the next convenient port of call. For an open thermostat, simply keep

a careful eye on the engine temperature to ensure that it doesn't decide to close. Again, replace it at the next convenient point. Test the thermostat by placing it in a pan of hot water and watching to see when it opens. As long as it opens before the water boils, you can assume it is OK. For a more accurate test, place a thermometer in the water and check the temperature when the thermostat opens. Thermostats usually have the operating temperature stamped on the case.



Thermostats can be mounted in various ways, but generally speaking they are easy to get at and can be removed and replaced by removing the housing, lifting the old one out and fitting the new one. Fit a new gasket to ensure the housing doesn't leak after replacement.

The raw water strainers need to be checked



1 The raw water strainers need to be checked on a regular basis, especially if cruising in shallow waters. A quick flush-out with clean water is all they need.



2 Make sure the pipework to the strainer is not partially blocked by rodding it through after cleaning the strainer basket.



3 Check the cover seal is in good condition and give it a light greasing to help it seal when the cover is refitted, otherwise the system may not prime.

...And finally

The final engine service item, once everything has been reconnected, is to refill the heat exchanger system with a 50-50 mixture of good quality antifreeze and water and recheck the level after the engine has run up to temperature and cooled again.



TIME TAKEN: Average 1 day

COMPETENCE LEVEL: Intermediate

UK COSTS: Spare pump, from £100-£1,000 depending on make and size of engine

- Alternator and pump belts, average of £3-£5 per belt
- Impellers, from £10- £150 depending on make and size of engine
- Thermostats, less than £10



Got a question? Email pbo@timeinc.com

Here's just a selection of the latest questions from PBO readers. Email or write to the address on page 5 and our experts will answer your queries

SURVEY AND CORROSION

Could stainless steel bolt corrosion lead to rig failure?

Q I am the first owner of a now 10-year-old Cornish Crabbers Pilot Cutter 30. The boat has always been anchored or stored ashore in Greece in the open, so exposure to UV light has been year-round: add to this the high temperatures and the salinity of the sea during the summer in the Eastern Mediterranean.

After putting the boat back in the water, I found that the head of one stainless steel bolt that affixes the samson post/bowsprit pivot fitting to the foredeck had broken off due to corrosion. Since then I have found broken-off heads of other bolts and screws on deck. So far, repairs have been easy, and no disastrous failures have occurred while sailing.

Nonetheless, I am worried about similar corrosion damage elsewhere that might lead to a disastrous rig failure. I am thinking in this regard about the chainplates of the lower shrouds that are affixed with bolts to the outside of the hull, and about all other components of the standing rigging – ie the shackles with which the upper ends of the shrouds are attached to the mast, the shrouds themselves, the turnbuckles, etc.

Can you please advise me how far I should go in



The head of one stainless steel bolt affixing the samson post/bowsprit pivot fitting to the foredeck of Jacobus Lubsen's Cornish Crabbers Pilot Cutter 30 had rusted off

preventively replacing components of the standing rigging? I am torn between only replacing the bolts that affix the chainplates, and renewing everything.

Jacobus Lubsen
Paros, Greece

COLIN BROWN REPLIES: Your bolts are suffering from crevice corrosion. The process is as follows: stainless steel needs oxygen to remain stainless, and any damage to the surface is rapidly healed with available oxygen as the chromium content oxidises to form the

familiar shiny surface. Low-oxygen conditions, like you might find in a deck or hull with water collecting under bolt heads, are ideal for pitting and crevice corrosion. Once this starts, the corroding 'active' stainless steel and the surrounding protected 'passive' stainless steel can form a galvanic couple that accelerates loss of material at the active site. In essence, part of the bolt becomes an anode for the rest of it.

This process can be initiated by chloride ions present in salt. As you have suggested, high temperatures and salt have

been contributing factors. High UV levels could also degrade the sealant around bolts, allowing water to get in and start the process. There are different grades of stainless steel with differing levels of resistance to crevice corrosion. Marine fittings should be 316 stainless, but other grades may have been used on deck. It is difficult to tell the different grades apart, but one simple test is that 316 stainless steel is not magnetic. There are other grades that are not magnetic, so this test is not definitive.

In your picture there are visible rust stains around the bolts. These are an obvious warning sign, and you should take out every bolt or screw that has stains around it. This is less easy with the rigging, which will have to be lowered. A gaff rig is under much lower stress than a Bermudan rig, so the often-quoted 10-year lifespan for stainless steel rigging would normally be considered too conservative. In your case you should pay close attention to all of your standing rigging and deck fittings. Take all suspect bolts, shackle pins and rigging screws apart for close examination, and replace where any material loss is found. A magnifying glass might help here.

It is possible to reduce the chances of the same problems arising again by using 316 stainless steel, by rinsing salt deposits off your stainless steel whenever you can and replacing sealant when it shows signs of weathering.

THE PBO EXPERTS

To ask a question email pbo@timeinc.com and include your address. Pictures are helpful



SEA SAFETY
Will Stephens is Staff Officer Operations (Coastal Safety) at the RNLI



BOAT BUYING
David Harding is a regular contributor to PBO: his photo archive is at www.sailingscenes.co.uk



CRUISING
Stuart Carruthers is the RYA Cruising Manager and has sailed extensively



SAILS
Ian Brown of the International OneSails loft group is an expert on sails



MASTS & RIGS
Mike Coates worked in the spar and rigging business for many years



SURVEY AND CORROSION
Colin Brown runs a marine survey and consultancy company, CB Marine Services



ELECTRICS
Paul Holland is chairman of the BMEA and MD of Energy Solutions (UK)



ENGINES
Pat Manley is a diesel engine course instructor and marine author

ELECTRONICS

Is my antenna at fault?

Q After fitting a new Lowrance Link-5 DSC-VHF, a radio check with the coastguard reported my signal to be weak and barely readable. At this time I was on my mooring in line of sight of the coastguard station, approximately 2NM distant. A check with my handheld received and transmitted a good signal.

Stripping the PL259 plug showed the braid to be corroded. Removing the antenna and stripping the RG58 coaxial cable at intervals along its length revealed the same problem. I purchased 15m of RG8 cable as replacement, as I was informed that this coaxial cable had a lower loss than the RG58. On fitting a short length of the new cable for testing, I found (using a simple battery and bulb) that I had continuity at all the points shown in the photo. Is the



antenna faulty, or is the test rig unsuitable for purpose?

Bob Hatcher
By email

CHRIS ELLERY REPLIES:

Some VHF antennas have a loading coil across the screen and inner connections, so as this aerial appears to have one in the picture then I am not too surprised at the results from your test. Using just a bulb and lamp test, though, is not really sufficient to test an antenna properly. You could connect the new length of cable and put a VSWR meter in line at the set end. The VSWR reading should be less than 1.3:1 (typically) on a new antenna. These meters are not cheap to purchase: one for VHF could cost £200, so it would be less expensive to contact your local marine electronics company and get them to test it. It's often cheaper, however, to simply replace the antenna with a new one. If water has penetrated the system once then it could happen again, and our recommendation would be to renew. The VHF radio is an important safety device, being one way of attracting help in an emergency, so we would never try to cut any corners in its maintenance.

PLUMBING

Probing the dimensions

Q I am currently fitting a black holding tank to my boat, and the hose from the tank to the deck plate needs to have a slight bend in it. Will this be a problem for the pump-out probe/hose? The hose to the tank is 38mm butyl, but I haven't been able to find out the dimensions of the pump-out probe/hose. Can you help, please?

Bill Jackson
By email

GARY SUTCLIFFE REPLIES:

The probe does not go down the tube and into the tank, if this is the worry. A number of boaters imagine that the probe has to reach the base of the tank, when in reality the tank should be built with a dip tube: a hose is attached to this and connected at the deck with an ISO 8099 deck fitting. The fact that the hose from the deck fitting is not vertical will not be a problem – the probe simply sits in the deck fitting, and a vacuum seal is made to suck the waste up the pump-out hose and into the machine.

Unfortunately, many boatbuilders have not adhered to the ISO standard on deck fittings and the respective part of the RCD. This has led to a number of non-standard deck fittings being installed that don't allow fitting of an ISO standard pump-out probe or make an effective seal. A number of adaptors are available to provide the boater with the correct fitting of the probe in the deck and to allow efficient sealing – and therefore an empty tank.

PLUMBING

Slats the way to do it

Q I have recently purchased a 5.5m (18ft) Plymouth Pilot launch: the previous owner had been doing her up, and replaced the original cockpit sole floor with two long pieces of plywood – one either side of the centreline. They are almost impossible to lift out with the boat ashore, and it's completely impossible to access the bilges when on the water.

My thinking is to replace these two plywood pieces with iroko slats (to allow drainage to the bilge) in sections so each can

be lifted, giving access below the floor. Do you think this idea would work, or would a solid floor – again in sections – be better, with the occasional drainage hole?

Robert Tindall
Bridgnorth, Shropshire

TONY DAVIES REPLIES: Your proposal sounds excellent. Not only will it keep the cockpit clear, it will also look superb. I'd recommend coating the iroko with Burgess Marine Wood Sealer, which will give a non-slip surface and a smart satin finish.



These are the duck boards which PBO editor David Pugh made for the project boat *Hantu Biru*

50 of the most frequently asked boating questions are answered by our experts on the PBO website. Visit www.pbo.co.uk



GAS FITTINGS
Peter Spreadborough, of Southampton Calor Gas Centre, has 20 years in the industry



PAINT AND ANTIFOULING
Richard Jerram is former UK technical manager of International Paint



YACHT DESIGN
Andrew Blyth is a naval architect with interest in stability and buoyancy



TOILETS AND PLUMBING
Gary Sutcliffe of Lee Sanitation knows about holding tanks, toilets and plumbing



TRAILER-SAILING
Colin Haines is a design engineer who has trailer-sailed for 25 years



ELECTRONICS
Chris Ellery of Greenham-Regis Electronics is a former Merchant Navy officer



BOATBUILDING
Tony Davies has been building and repairing wooden, GRP and steel boats for 40 years



WOOD
Richard Hare is a wood technologist and long-time wooden-boat owner

SAILS, RIGS AND MASTS

How should I rig my topsail?

Q I recently bought a gaff cutter, and after a few weeks of preparation I was ready to sail her home to Newport in South Wales from Milford Haven. The last job I needed to do was attach the sails. After some trial and error I got the jibs installed and rolled, and then came the main: all straightforward and without problem. At the bottom of the mainsail bag I found another bag containing a topsail and some line and blocks. As the boat was new to me I made the quick decision to leave well alone until I had time to sort it all out once I was home. And here is the rub: I cannot see what all the kit is for or how it should be rigged. Searching the internet and John Leather's books are no help.

The gaff has two holes in the throat halyard attachment; there is no fixing point at the end of the gaff; there is an eye at the top of the mast through which a halyard is passed; there is no topmast on board, but the sail has eyes fitted.

The lines shown in the photo are 9 and 14m long, and there are three small blocks plus one triple. I'm hoping that there is some way to rig the sail so it can be reefed single-handed without taking it down.

Keith White
Abergavenny

COLIN 'PLUM' STROUD,
ON BEHALF OF THE
OGA (OLD GAFFERS
ASSOCIATION), REPLIES:

Considering topsails are often the smallest sail on a gaffer, they are notorious for the numerous ways of setting and hoisting them – and for the very limited published



instructions! The photo of your topsail shows lacing eyes/grommets running the full length of the luff, indicating it should have a full-length luff yard attached. This arrangement is often referred to as a 'Cornish yard topsail' and is common on the Falmouth Working Boats.

You may not have all the correct parts in your kit as topsails usually have three lines – halyard, sheet and downhaul. For a full description of rigging this type of topsail, I recommend you visit www.galawebsite.co.uk, and

after registering (it is free), go to the 'publications' page where you will see a free publication for downloading called 'Hoist The Topsail'.

Regarding your question about reefing without taking down the topsail, although there are a few exceptions, the topsail is usually the first to be removed when you need to reduce sail area, and this is done by lowering it completely. If you get in touch with your local area of the OGA via www.oga.org.uk you will find someone happy to help you.

PAINT

Baffled by the blisters

Q The paint has come off the fuel tank baffles in the glassfibre tank on my 1970 Triana Tropica. The paint appeared to have massive bubbles in it, but these are hard to press. Could this be ethanol, and is it a problem?

Anthony Jordan
By email

RICHARD JERRAM

REPLIES: To repair the baffles would not be very practical, and it would make more sense financially to replace your GRP tank with a stainless steel or plastic one. Firstly, access to the tank is very limited, and you would have great difficulty in reaching all the baffles. Even if you had better access, you'd still have to remove all the gelcoat and then flush the tank with fresh water to remove all traces of the fuel. You would then have to coat with a fuel-resistant epoxy, ensuring that you achieve at least 500 microns dry film thickness. This type of coating is usually only available for large commercial vessels and would only come in 20lt drums. Also, this type of coating has to be applied to a strict specification, so there is a strong likelihood that a breakdown could happen prematurely. Therefore, a stainless steel or plastic tank looks to me like the more practical route.

ENGINES

Which driveshaft rubber glue?

Q I recently had the misfortune to get a pick-up buoy line caught in the prop of my Hurley 24, which resulted in a dull thud then no drive.

On inspection, I found that the flexible shaft coupling had separated. This consists of two metal discs approx 100mm in

diameter with a rubber core in between. It's not held together with any bolts, but simply relies on the bond between rubber and metal for strength.

The rubber doesn't appear to be damaged in any way – just parted from the metal – and I'm wondering if there is a product

on the market that will bond the two surfaces back together again with sufficient strength to maintain drive? The engine is a Yanmar YSE 8, so there's maybe not a huge amount of torque involved.

Paul Kings
By email

PAT MANLEY REPLIES:

I wouldn't advise you to try a DIY repair on your coupling. The chances of it holding are very poor, and you may end up losing drive at a really inappropriate time. It is possible that the incident may be covered by your boat insurance policy, in which case the cost of a replacement might be covered – it's worth a check.



Case study

Moody 336

Boat name Nickla Thyse

Location Poole Harbour, Dorset

Treatment Coppercoat® anti-foul applied 1994

Photo Celebrating 20 years of continual effective protection; Jayson Kenny of Coppercoat® with owner (right).

Verdict The original Coppercoat® treatment has now lasted for over 20 years & continues to do so. No re-treatment yet required.



Award winning anti-fouling Multi-season protection

Coppercoat® is the most durable and long lasting anti-foul coating currently available. Millions of boat owners world-wide are in the habit of lifting and re-painting their boats every year – Coppercoat® puts an end to this costly and time consuming exercise.

+44 (0)1258 861059
info@coppercoat.com
www.coppercoat.com

Eco Power Shop - The Marine Wind Turbine Supplier!



- We Stock All Leading Brands of Marine Wind Turbines
- Plus Mounting Kits, Marine Solar Panels & Accessories
- Turbine Servicing & Spare Parts also Available
- Worldwide Express Shipping, After Sales Support & Advice

Visit our Online Store or Call Us on : **+44(0)1403 261062**

E-mail : **sales@ecopowershop.co.uk**

VAT 998 036 960 / EORI GB 998 036 960 000



www.ecopowershop.com



The finished area is like a marine playpen. A nice flat surface to sit or stand on, and with the gunwale at perfect peering-over height

A safer open boat – for your toddler

Safe, small, open boat trips and young children needn't be mutually exclusive. Jake Frith reports on a low-cost fix that has increased confidence on the water for his young family

We often take my young son, Daniel, for gentle trips up the river in settled weather in *Mahogany Bob*, my 1965 14ft LH Walker tender. When he was a small baby, things were much easier: we popped him into his car seat, which jammed nicely into the forepeak area forward of the bow thwart, and he slept through most trips while we got on with things.

Now he's 18 months old, he plays more of an active role in proceedings: he is very much up and about, and makes short work of climbing up over the thwart to get into the main part of the boat where all the action takes place. This is not a great place for him to be as we mainly row, so elbows are flying about; plus, once he gets out of the bow area with its



Young Daniel in *Mahogany Bob*, his dad's 14ft tender

raised floorboards, he's into the bilge with seawater sloshing about (this is a clinker boat) so it has often ended in wet trousers and an about-turn back to the slipway.

What we needed was a soft barrier to stop him coming aft. This would also help to keep his toys out of the bilge and give him an area of the boat that feels like his own. Just as importantly, it

would also help the adults relax a bit and get on with the job in hand.

My initial thoughts were to cordon off the bow area with a fishing net-type mesh. I was at the chandlery, about to buy a suitable length of the netting usually used to keep hank-on genoas inside the lifelines at the bow of racing yachts, when I was suddenly struck by a 'what if' scenario. It wasn't a palatable thought, but in the highly unlikely event of a capsize, this netting would be exactly the right size to tangle a toddler's hand or foot.

It turned out that the perfect material had been sitting at home all along. I had a few old vinyl advertising banners, made of the same heavy vinyl used in truck curtain sides and some boat covers. This would stop toddler and toys moving aft without presenting an entrapment hazard.



The banner had a doubled-over hem, so I was able to thread a line through the top using a sprung claw device designed for retrieving lost bolts in car engine bays



Once the top was cut to length, I marked then cut the bottom to roughly follow the line of the bilge



Eyelets were placed at strategic points to hold the 'curtain' to the bilge. I used plastic eyelets for reasons of corrosion resistance



One of the benefits of a clinker boat is the endless number of tying points. I was going to add more eyelets and ties, but a quick test drive proved they weren't needed

Tips and tricks – babies, toddlers and open boats

Only you will know if the very slight risk of taking very young children in small open boats is worth it for them and your nerves. This is not an exhaustive list, but here are a few thoughts and lessons we've learned:

■ **Consider the worst-case scenario.** I can't make my boat capsize by standing on the gunwale and jumping up and down, but we still have a plan in case a collision with a larger craft or some other unforeseen circumstance could lead to this unlikely eventuality.

■ **Bring toys – but not good ones.** Young children like to drop toys and teddies overboard then cry in anguished surprise about the results, but you will probably need to bring such items to keep them entertained. We combat this with a combination of teddies on strings (tied to the boat), floating toys that we can go back for and a bucket full of beach pebbles, collected at the start of the trip, which he is allowed to drop, one by one, over the side.

■ **Aim low.** Our first trip was just 20 minutes long. I've heard many stories of young children put off boats for life by an overenthusiastic Dad (or Mum) taking them on a three- or four-hour epic. We won't be leaving the safety of the river in this boat for many years yet as a family.

■ **All children should wear a correctly-fitting lifejacket or buoyancy aid on all boats.** Start them young and they don't seem to mind it at all.

■ **Assume all clothes will get wet.** Bring lots of spares!

■ **Know a lot of songs and rhymes.** This one's actually pretty useful for any situation where children could get bored, on land, sea or anywhere else.



Support from Mummy while Daniel gets used to his new domain

PBO conclusion

For what was a zero-cost modification that took about half an hour to make and fit and is completely removable in two minutes, this has really transformed our time out on the river. It's a special (and for me as a lifetime boater, important) sight to watch my son waving at other boats, and taking in the sights and sounds of the river for the very first time in a life that I hope will include boats somewhere along the line. This simple addition has helped make this easier to achieve.



PBO Products and services



£4.99

PBO PROJECT BOAT HANDBOOK

■ This 128-page restoration guide follows Hantu Biru's journey from a Dorset fish farm to cross-Channel cruising. All for only **£4.99** with free UK postage and packaging. Tel: 01202 440830



£17.99

2016 PBO SMALL CRAFT ALMANAC

■ Full of information covering UK waters, Ireland and much of north Europe. Order yours now from chandleries and online bookstores. Just **£17.99** or Tel: 01256 302699



£1.99

PBO SKIPPER'S HANDBOOK

■ Your quick-reference guide, featuring 64 pages of expert advice on Colregs, cruising, safety, sail trim, maintenance and equipment, all for only **£1.99** Tel: 01202 440830



£6.99 EACH

PBO CARTOON MUGS

Celebrating eight years of Claudia Myatt cartooning in PBO, a dozen comedy boating designs – inspired by Dave Selby's columns – are now available on mugs! Priced at **£6.99** each, plus p&p from www.gone-sailing.co.uk/cartoon-mugs/



£1.75



£5.95



£2

PBO SKETCHBOOKS 3, 4 & 5 IN STOCK

£3.75 each or 3 for £10 Sketchbooks 1-5 are available to download from www.pbo.co.uk



£3.99



£4.99



£4.99



£4.99

PBO PLAYING CARDS Call 01202 440832 to order our playing cards, with 54 free anchorages. Priced at just **£4.99**+p&p



£6.50

PBO BINDERS

■ Ideal for storing a year's worth of your favourite yachting magazine. Just **£6.50** plus p&p. Tel: 01202 440830



BUILD YOUR OWN PBO 'PUP'

PRICE: £24.00 Fully dimensioned building plans for the 2.33m (7ft 8in) Pup including drawings for the building jig, hull panels, spars and sails.

KITS ALSO AVAILABLE! Kit including timber and plywood: **£404** Kit with all wood ready-cut to size: **£687**

PBO Copy Service

Photocopies and downloadable PDFs of articles, guides and reports from PBO · Yachting Monthly · Yachting World · Motorboat and Yachting · Motorboats Monthly

Telephone 01202 440832

LINES OPEN: 9.30am-3.30pm Monday to Thursday

www.pbo.co.uk (click on Find PBO articles)
email: copyreport@timeinc.com





4 rig tension gauges



It's vitally important to ensure that the tension of your boat's rigging is within the correct limits: Alex Bell tests four rig tension gauges to assess their accuracy

Getting the correct tension on the shrouds on my various boats over the years has always worried me. Too slack, and I know that the sails won't be working as efficiently as they can: and, worse, the rigging and mast fittings can be subjected to shock loads and fatigue.

Too tight results in extra strain on the various attachment points of the rigging and the shrouds themselves, and can distort the hull as the loads are transmitted through the chainplates. Most mast breakages occur when the mast is overloaded, either by the wind or, more frequently, a collision. Modern stainless steel shrouds themselves rarely break, but the fittings to the mast or the boat do fail, with consequent failure of the mast.

Fortunately, there are devices available on the market that enable one to measure the tension and make sure it is set within the right limits. There are currently three makes of rig tension gauge on the UK market designed for yacht rigging:

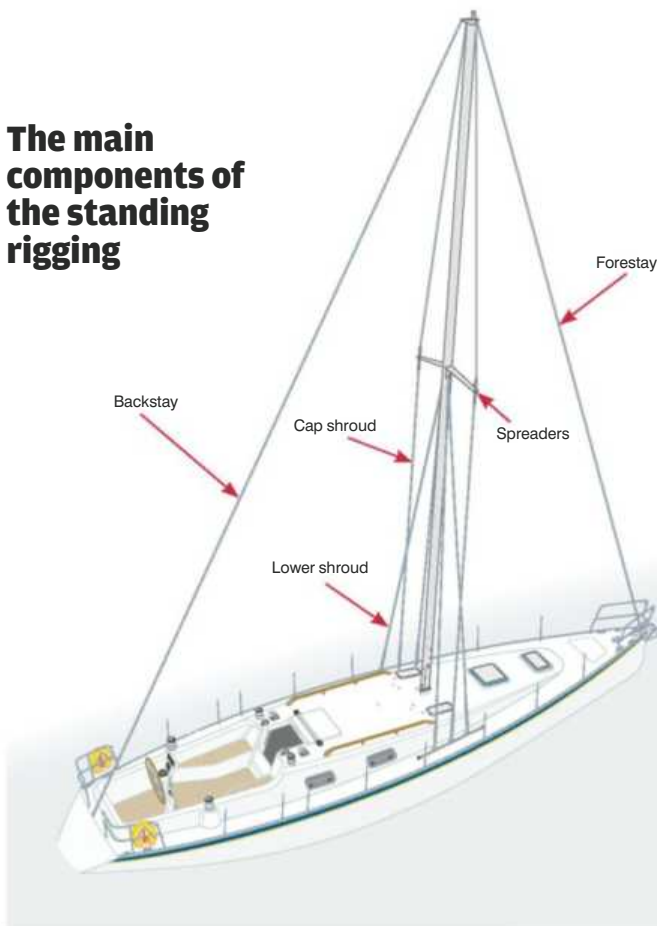
- The Loos, which comes in Standard and Professional models, each in three different shroud diameter ranges, from 2.5 to 10mm.
- The SureCheck, which comes in four sizes, from 2 to 10mm.
- New on the market, the Spinlock Rig-Sense is only available in one size at the moment: 2 to 5mm diameter.

Yacht rigging

Whether a yacht has a masthead or fractional rig, they all have common rigging features: a forestay and a backstay to support the mast longitudinally (ie forward and aft), and the lateral rigging supporting the mast across the boat. Many yachts will have an adjustable backstay in which the tension can be varied: such adjustments will always affect the tension in the forestay, particularly with a masthead rig. The lateral rigging, known as the shrouds, requires a fixed tension to keep the mast upright in the transverse plane.

Most sloop-rigged yachts will carry two sets of shrouds. One set will terminate just below the spreaders – the lowers. The other will pass through the ends of the spreaders and terminate at the masthead (masthead rig) or lower down at forestay level (fractional rig) – the cap shrouds.

The main components of the standing rigging



Andrew Simpson

A larger mast will require more spreaders spaced up the mast to support it. Spreaders on masthead-rig yachts tend to be angled transversely across the boat, while fractional-rig boats usually have the spreaders swept back at an angle to help support the mast in a longitudinal direction.

Mast theory

In purely engineering terms, yacht masts are structural columns designed to resist the compressive forces and bending moments applied by the loads they are subjected to by the

rigging and the wind. Leonhard Paul Euler (1707-1783), a Swiss mathematician and physicist, provided the basic theory that structural engineers and mast designers use.

Euler established that a column will buckle long before the applied load would cause it to fail in pure compression, and went on to prove that the load at which buckling failure will occur depends on the 'slenderness ratio'. This is expressed as the effective length of the column divided by the radius of gyration of the column section – the l/r ratio.

Shroud construction method and material



Most yachts have shrouds made from 1x19 wire: this comprises 19 wires of the same diameter. One wire runs up the middle, six wires are wound round it and then 12 wires are wound in the opposite direction around them.



A variation is Dyform wire, which uses shaped strands which fit together in a more compact way. Another is to use wire that is itself wound: this can give, for example, a 7x19 wire. Racing yachts also use solid rod to form their stays and shrouds, a more expensive option.

Most stays and shrouds these days are made from 316 stainless steel, which is specially produced for marine applications because of its ability to resist pitting corrosion. While not completely rustproof, the alloy is more corrosion-resistant than other common stainless steels.

How we tested them



In our test, we wanted to see how the rig tension gauges performed over a range of loads. Yacht Production & Surveying student Matt Turner (below) and I took a length of 5mm-diameter 316 stainless steel rigging wire that had both ends fitted with a swaged eye. We set this up in an Olsen tensile testing machine in Southampton



Solent University's material test laboratory. We programmed the machine to apply five different loads progressively on the wire, ranging from 100kg to 500kg. This represents around 4% to 22% of the wire's break load. At each load we measured the reading on the different gauges to see how they performed.

Adjusting cap shrouds by the 'folding rule method'

Seldén, in their excellent publication *Hints and advice on rigging and tuning of your Seldén mast* (also to be found on their website), suggest this method as an alternative to a rig tension gauge. It works on the principle of measuring the extension of the shroud under load. You will need:

- 2m-long measuring rod (a 2m folding rule is ideal)
- Vernier callipers
- Adhesive tape

METHOD: Start with both cap shrouds hand-tight. The rig is stayed with the lower shrouds and the forestay and backstay. Attach the 2m rule with the adhesive tape at the top to the starboard shroud about 5mm from the upper end of the wire terminal. Measure the distance accurately using the Vernier callipers. Call this measurement x . Tension the cap shroud until the distance is $x + 1.5\text{mm}$, noting the number of turns required to do this. Move across to the port shroud and tension the rigging screw the same number of turns.

Return to the starboard side and adjust the tension until the gap is $x + 3\text{mm}$. The shrouds are now tensioned to 15% of their breaking load. If the mast is not straight, adjust the lower shrouds. The folding rule method can be used on other stays, such as the backstay and forestay (without jib furling system). It can also be used for Dyform or rod rigging, but you will need to take the difference in stretch into account compared to 1x19 wire (see the Seldén website). This method works for different diameter wires because the extension is proportional to the cross-sectional area and the break load.

Rig tension gauges on test



Loos Standard

PRICE: £84.95

Contact: www.force4.co.uk

Readings are based on 1x19 stainless steel cable: two models are available, each covering three wire sizes. Manufactured from anodised aluminium, the gauge cannot be left on the shroud when tensioning as it has to be held in position. The gauge comprises two aluminium arms which are riveted together at the bottom end. The wire is placed in a groove at the riveted end, then the gauge is placed up against the shroud and a piece of string is pulled so that one of the arms extends to a maximum value. The reading is then taken from the other arm on a scale: this reading is then transferred to a scale on the arm which enables the tension, in kg, to be read on the appropriate diameter scale.

This gauge is straightforward to use, and an instruction sheet is provided.



A scale on the arm enables the tension, in kg, to be read on the appropriate diameter scale



Loos Professional

PRICE: £119.95

Contact: www.force4.co.uk

The Loos Professional gauges are designed to have a higher accuracy than the Standard gauges. Readings are based on 1x19 stainless steel cable, and six models are available – three sizes in either metric or imperial. The gauges are manufactured from anodised aluminium, and supplied with instructions and a conversion chart.

The gauge comprises a flat aluminium plate with two fixed spools at the bottom and a sliding nylon hook at the top which engages the stay. The hook is attached by pulling on a string attached to the slider, which works against a coil spring. The slider has a pointer which runs along a scale. A reading is then taken from a table on the plate graduated to wire diameter.

It is simple to use, but care is needed to eliminate friction in the slider. The shroud tension can be adjusted with the gauge attached to the wire.



The slider works against a coil spring, and has a pointer which runs along a scale



SureCheck

PRICE: £85.00

Contact: www.baselinemarine.com

The SureCheck is calibrated for 1x19 wire. Manufactured from stainless steel, the gauge comprises two arms pivoted at one end, the other being held together by a coil spring. A grooved nylon spool is rotated until the correct wire size is selected; the gauge is then attached to the stay by pulling on a ring so that the grooved spool is hooked over the wire. The two arms should be squeezed together and released. The reading is taken against the last red dot exposed by the left-hand arm. The load reading is obtained from a graph provided as a percentage of the break load, based on a figure of 2,000kg for 5mm diameter wire.

The gauge can be left on the shroud while adjustments to the tension are made. At the top end, the graph provided was difficult to get percentage break load readings from because the curve flattens out.

This is a robust and good-value gauge, but it is important to ensure the correct wire diameter is selected on the spool.



The reading is taken against the last red dot exposed by the left-hand arm



Spinlock Rig-Sense

PRICE: £125.00

Contact: www.spinlock.co.uk

The Spinlock Rig-Sense is a new rig-tuning tool developed to give consistent and repeatable measurement of loads on different wire composition as well as fibre. It is manufactured from anodised aluminium with glass-filled copolymer components and a composite leaf spring. The wire grips are stainless steel, which should reduce wear and give constant readings over time. The leaf spring is calibrated to output load readings to a direct linear scale in kg. The Rig-Sense allows one-handed operation, and comes with a carry bag: an app can be downloaded to smartphones or tablets to enable readings to be recorded and shared for future reference.

This is easy to use and gives a direct load reading: it can be left in position while adjusting the shroud tension. The design eliminates friction, which should lead to consistent readings.

It is currently only available for 2 to 5mm wire.



The leaf spring is calibrated to output load readings to a direct linear scale in kg

PBO results and verdict



As we expected, the readings taken from the gauges varied slightly from the actual loads. There will be a number of reasons for this.

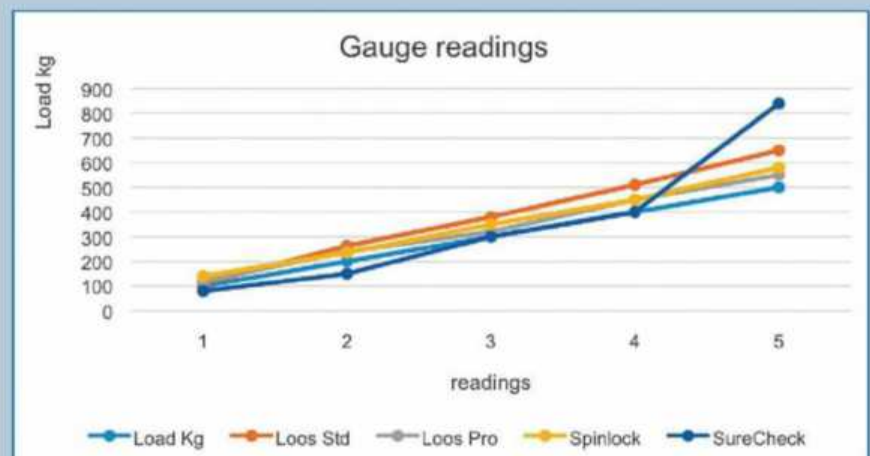
Firstly, some readings require some interpolation between two marks on the scale. There is some skill in operating the gauge: the effect of friction, which can lead to a false reading, has to be reduced. From the graph, the SureCheck final reading looks suspect, but this was probably because the conversion graph tended to a horizontal line at the upper range which made for larger reading error.

The Loos Standard gauge was simple to use, but could not be left on the shroud when it was being tightened. The Loos Professional gauge gave a more accurate reading than the Standard gauge and could remain on the shroud during tension adjustment. The SureCheck was straightforward to operate, but it was more difficult to obtain results at the top of its range.

The Spinlock Rig-Sense was the only gauge that allowed the load to be read directly and whose design eliminated the effect of friction in the mechanism. For ease of use it gets the best buy, but until the model range is extended to accommodate larger-diameter wire, it has limited applications.



The Spinlock Rig-Sense was the only gauge that allowed the load to be read directly



As we expected, the readings taken from the gauges varied slightly from the actual loads

RESULTS: Shroud 5mm 1x19, 316 Stainless Steel, Breaking load 22kN*

	Shroud tension			Gauge readings in kg			Rdg % break load	Load kg
	Kg	N	As % of UTS*	Loos Standard	Loos Pro	Spinlock Rig-Sense	SureCheck	SureCheck
1	100	981	4.5	109	120	140	4	80
2	200	1,962	8.9	263	240	235	7.5	150
3	300	2,943	13.4	380	320	350	15	300
4	400	3,924	17.8	510	450	450	20	400
5	500	4,905	22.3	650	550	580	42	840

* Breaking load and Ultimate Tensile Strength (UTS) are taken to be equivalent

■ Thanks to David Aldridge of Aladdin's Cave Rigging for providing the 5mm wire used in the test.

Budget dinghy repairs

You don't have to pursue an award-winning finish in order to transform a neglected, rotting, 12ft sailing dinghy into a perfectly safe and serviceable craft, as David Pugh reports

If you read last month's feature on forward-looking sonar, you might have noticed a tatty-looking dinghy cowering beneath the thousands of pounds-worth of equipment on test.

The dinghy in question is an old 3.6m (12ft) Tepco sailing dinghy, modified years ago for use as a tender. My first memories of it date back to learning to sail on my uncle's boat as a teenager. One day, while heading out to his boat, the outboard failed and my younger cousin and I started to row. Our progress in the heavy boat, stuffed with provisions and (I have to say) more competent rowers, was pitifully slow – so slow, in fact, that the passing RNLI inshore lifeboat saw fit to offer to rescue us.

In time, its weight and size prompted my uncle to replace it

with a younger, sleeker model. Since then, the boat has seen little love, spending its time upside down first in a hedge and then in the PBO car park, after a brief spell afloat as part of another test. In short, then, it seemed the ideal choice when we needed a hull in which to drill seven huge holes for through-hull transducers.

Neglect is no friend to any boat, however, and as we turned the hull the right way up most of the timberwork fell off in a shower of rotten splinters and woodlice. At some point in its history, the gunwales and some of the knees had been replaced with plywood, which had rotted and delaminated beyond repair. The forward bulkhead and half deck, also plywood, were in a similarly poor state, but the solid hardwood thwart and side benches had survived well and could be



ABOVE The new bulkhead epoxied in place. The lashing holds the hull in shape while the epoxy sets
RIGHT A flush-cutting multi-tool removed the original GRP tabbing



retained. However, the plywood panels below them, intended to enclose polystyrene buoyancy blocks, were scrap.

Although some of the woodwork was cosmetic, knees, gunwales and bulkheads provide much of the hull's rigidity, so something had to be done.

Tear down

Our first step was to rip out all of the rotten timber. A demolition bar made short work of the gunwales, foredeck and plywood panelling; the bulkhead put up more of a fight, but with the aid of a Bosch multi-cutter we cut away the glassfibre holding it in place and it pulled away. A run round with the vacuum cleaner revealed a sorry sight, with flaking paint and a crack in the port side extending about six inches down from the gunwale.

Clearly, we needed some materials, so we headed down the road to visit our local builders' merchant, Sydenhams. They supplied us with four 4m lengths of pressure-treated softwood approx 40mm x 15mm, a sheet of 6mm WBP ply and a sheet of 9mm WBP ply for £38. The local branch of Screwfix provided a box of 200 stainless steel screws for £14: these are A2 stainless, so not ideal for the marine environment, but we reasoned they would probably last as long as the softwood. A trip to the chandlery to buy an inspection hatch, two drain bungs and 1.5kg



Transferring the shape of the hull to the bulkhead to gain a good fit

of epoxy set us back a further £50, bringing our expenditure to £102.

Minimum restoration

We started work by repairing the glassfibre damage. A thick mix of epoxy neatly filled the numerous screw holes where the previous gunwales had been screwed through. The crack in the port side we simply ground back and reinforced on both sides with strips of glass tape wetted out with unthickened epoxy.

The next stage was to make and fit a new forward bulkhead. We roughly cut a new panel from 9mm plywood using the old bulkhead to give the shape. However, on putting it in place we found that the



A demolition bar made short work of the rotten gunwales and foredeck



New foredeck spine in CLS softwood – we coated it with epoxy to prevent it from rotting. Note the new gunwales, steaming in the curtain (top right)

hull came away significantly at the top – clearly the old bulkhead had been partially responsible for maintaining the hull shape. To resolve this, we ran a lashing around the boat to pull the sides of the hull in to the bulkhead, then used a dummy stick to transfer the hull form to the plywood. A few tweaks with the jigsaw and a block plane gave us an adequate fit to the hull.

We put the new bulkhead in place with the hull held to shape with a lashing. We then bonded the plywood in to the hull using wide glassfibre tape wetted out with epoxy, and left it to set.

Once cured, we trimmed the top to shape, cut a circular aperture to fit a standard dinghy watertight hatch and made a drainage hole for a bung at the bottom. We then made a centre support for the foredeck using a length of studding softwood and refitted a length of the original hardwood to support it.



A new bung fitting in the transom improved the boat's seaworthiness

New gunwales

To replace the inner and outer gunwales, we opted to use treated softwood. Although not as durable as hardwood, pressure-treated softwood is cheap, lasts reasonably well and, in this case, is easily replaced.

We were able to buy the timber in 4m lengths, saving the need to scarf two pieces, but found that it was not quite flexible enough to bend around the forward part of the hull. To solve this we built a simple steam box using a metre length of drainpipe, insulated with an old curtain and with a wallpaper stripper steamer inserted into the bottom of the pipe.

Prior to steaming, we stepped the forward ends of the inner gunwales by 6mm to allow for the foredeck. We then rigged our steamer around an inner and outer gunwale pair, aligned with the

using clamps to hold the inner and outer gunwales in alignment, we screwed the two lengths together. Once in place, we trimmed the ends flush at the transom and shaped them at the bow.

Replacing the deck

We took the easiest option to gain the shape of the foredeck, placing the sheet of 6mm plywood over the top and drawing around the gunwales. Allowing a 20mm margin for the outer gunwale, we cut it out and offered it up to find it fitted adequately well.

To proof the timber against rot we gave the new bulkhead, deck and supports a coat of unthickened epoxy before screwing the deck into position and filling any gaps with thickened epoxy.

Once complete, we gave the whole lot a coat of Sandtex textured masonry paint, left in stock from a non-slip paints test.



Out on the water, testing forward sonar units (PBO March 2016)



Clamping the freshly-steamed gunwales in place before screwing through to fix them

section of maximum bend.

As a rule of thumb, timber takes about an hour per inch thickness in the steam box to become flexible. We withdrew the timber after 40 minutes and found it bent easily around the hull. Working as quickly as possible down the hull,

Conclusion



Our aim was to get the dinghy afloat for minimum expense of time and money, whilst doing so well enough that we wouldn't need to do it again every time we use the boat.

Everything worked well, with the exception of the Sandtex paint which started coming off when scuffed around by feet and seawater, leaving a milky residue. We were particularly pleased with how easily the gunwales bent into place once we had steamed them.

We now have a useful, stable and seaworthy dinghy – apart from the seven large holes we drilled for the transducers!



Readers' cruising destinations, near and far

We pay for your published cruising stories and harbour updates. Email pbo@timeinc.com or write to the address at the top of page 5



Essaouira: our boat is in the middle of the raft in the background

Moroccan spice

Terysa Vanderloo recommends the unique cruising ground of Morocco's Atlantic coast



Morocco is less than eight miles from Europe at its closest point, and yet you could not find two cruising destinations more different from each other. Many cruisers on their way south from Europe opt for an offshore passage to either Madeira or directly to the Canaries. However, cruising the Atlantic coast of Morocco offers a wonderful opportunity to explore this fascinating country, steeped in history and culture.

We sailed south from Cadiz and, as we reached the African continent, the scent of warm spices greeted us. Our first port was Morocco's capital, Rabat. After an overnight passage, we were thrilled to see Rabat's ancient walled kasbah, standing proud on the Atlantic coast.

It is required that you call the marina, either on VHF or by phone, before your arrival so they can send out a pilot boat to guide you upriver to the marina. There are sandbars at the entrance, which will occasionally be closed due to large Atlantic swell. Caution is advised at all times, and you should time your arrival for HW if possible. Night entry is not advised, except in exceptionally calm Atlantic conditions.

Bouregreg Marina is situated on the southern side of the River Bouregreg in Salé, Rabat's sister town. Rabat, on the northern bank, is easily reached by monorail or on foot. The marina is very pleasant: modern, clean, well-maintained, with several upmarket bars and restaurants. There is Wi-Fi in the office, and 24/7 security. This is an

excellent place to leave your boat for a trip inland. Fez, for example, is three hours away by train.

There are very few tourists in this part of Morocco – especially in Salé, where we were obviously a bit of a novelty – and the medinas are fascinating. They sell everything: food, jewellery, fabrics, carpets, woodwork, clothes and more. The fresh produce quarters were truly an assault on the senses. If you don't fancy watching your dinner being slaughtered in front of you, a large and modern Carrefour is a

10-minute taxi ride away.

Our next port was 33 miles away, a sleepy town called Mohammedia, which has a small and very crowded marina. We saw many boats turned away, and were lucky to get in at all; calling to reserve a berth in advance is essential. Mohammedia has a small medina offering some fresh fruit and vegetables, but with few restaurants and limited provisioning opportunities there is not much else here to attract cruising yachts.

En route to Essaouira

We then sailed the 195-mile passage to Essaouira. It is possible to break this up into day-sails: Jadida and Safi are both fishing harbours which offer berthing for yachts and another chance to enjoy the local way of life.

On approach to Essaouira, the inside of the harbour is not visible. Only after rounding the western harbour wall does this lively fishing port come into view. To port, there are dozens of fishing boats rammed in

together. To starboard, the orange lifeboat is available to raft up against – clearly it is rarely used as an emergency vessel! Past the lifeboat was an old Bénéteau First (used occasionally as a day charter) moored up to a pontoon. Rafting up alongside is another option. We had 2m depth underneath us here; it was a little deeper next to the lifeboat. Despite our initial confusion, we had many friendly locals directing us where to go and helping with our lines. Electricity and water are both available on the pontoon, and the nearby restaurant Chez Sam has unlocked Wi-Fi.



The medina in Essaouira is home to many small businesses

ABOUT THE AUTHOR



Terysa Vanderloo quit her job as a paramedic to take on the 2015 Atlantic Rally for Cruisers in her Southerly 38 yacht *Ruby Rose* with her partner Nick Fabbri. Now enjoying the Caribbean, their eventual aim is a circumnavigation.

Follow Terysa and Nick's adventures at www.rumsodomyandthelash.com



Rabat kasbah as seen from our yacht as we approached

Essaouira is an ancient town, full of activity, with plenty to do and see. There are many traditional and excellent Moroccan restaurants, and local shops sell everything from hand-carved wooden ornaments to carpets and musical instruments. Additionally, this is the place for outdoor enthusiasts: kitesurfing, horse riding, surfing and quad biking are just some of the sports on offer. Or simply sit in your cockpit and watch the constant spectacle provided by the activity of Essaouira's fishing harbour!

Our final port was Agadir, a modern town situated behind a large beach. The marina is new and very attractive, offering excellent shelter. There is also security and Wi-Fi in the office, and plenty of restaurants in the marina complex and along the beachfront. The only issue was the state of the showers, which were being used as some sort of storage facility while we were there. The coast to the north of Agadir offers some of Morocco's best surfing, and it is a popular departure point for the Canaries: Lanzarote is 220 miles away.

It is necessary to clear in and out of every port. In some places, like Rabat, the process is quick and efficient. All the necessary officials – police, customs and immigration, and the marina staff – board the boat and will happily enjoy a chat with you as you fill in the paperwork. However, some patience and a good sense of humour is required for other ports, and although the vast majority of officials are friendly

and helpful, the process may still take longer than you expect.

The cost of cruising in Morocco is, unsurprisingly, cheaper than Europe. Our marina fees varied between 200-240 dirhams (£12-£14 at the current exchange rate) per night. Occasionally – as in Mohammedia – there was an additional port fee of 120 dirhams (£8).

Unique perspective

Exploring the Moroccan culture is one of the delights of cruising this coast, and as a cruiser you will have a unique perspective. Because you will likely be away from the major tourist centres, it may be difficult to find people who speak English, even in marinas or customs. French is widely spoken.

Baksheesh (tipping) is occasionally requested. When the owner of the Bénéteau First in Essaouira helped us with our lines and kept an eye on the boat while we were off exploring the surrounding area, a bottle of wine and a few beers were gratefully received.

Sailing the Atlantic coast of Morocco was at times challenging: the lack of infrastructure for yachts and the additional level of bureaucracy we had to deal with was, at times, frustrating or confusing. However, it was an incredibly rewarding experience to explore this fascinating and friendly country, and I truly hope that more yachts consider making the effort to discover this unique cruising ground.



Agadir Marina is 'new and very attractive, offering excellent shelter'

Free anchorage!

Spurn Bight, River Humber



Tony Kirkman

Spurn Head is the promontory guarding the mouth of the River Humber

A good anchorage can be found in the north channel of the River Humber, inside Spurn Head, offering shelter in northerly and easterly winds. It is uncomfortable in strong north-westerly winds, particularly on a spring ebb.

The *Cruising Almanac 2016*, compiled by the Cruising Association and published by Imray, recommends anchoring in 1-3.5m, opposite the lighthouse off the brickyard chimney, north of the pilot boat station. The clay bottom gives good holding but the ebb can be strong.

According to the Associated British Ports website (www.humber.com), safe anchoring

can be found in the Spurn Bight, where a yacht buoy is available for mooring purposes. Care must be taken not to interfere with pilot-launch operations. Anchoring is also possible close to the north bank near Hawkins Point. This is the only area on the Lower Humber where protection can be gained from north-westerly winds.

Safe anchorage can be found close inshore between North Killingholme and Skitter Haven when strong winds are blowing from a direction between west and south-west. The brickyard chimney provides a useful landmark. The area close inshore at Paull offers shelter from winds coming from a northerly direction.



Send in your free anchorages and win a pack of PBO playing cards for published suggestions

Email pbo@timeinc.com or write to the address at the top of page 5

Call 01202 440832 to order our playing cards, with 54 top spots: just £4.99 + P&P



CRAFT FOR SALE

ABYA
PROFESSIONAL
YACHT BROKERS



When you're buying or selling a boat always use

QUALIFIED EXPERIENCED PROFESSIONALS

Look for these logos. Our members have been setting the standards in Yacht Broking & Conveyancing, Designing & Surveying since 1912

YDSA
PROFESSIONAL YACHT
DESIGNERS & SURVEYORS



Westerly Chieftan 26'



1973 for sale. Three sails, three cabin, toilet, new engine 20hp BETA (25 hours) new cushions throughout, wind generator. 5/6 berth. Owners illness forced sale. Possible mooring available. Lying ashore Lynher Boat Yard, Cornwall. Including inflatable dingy and out board

£7000 all offers considered
For further information call
Alan 07973842078

Norfolk Gypsy - "Gypsy Mistress"



Boat 48 - green hull - Yanmar 1GM10 diesel High initial specification with extensive additional cruising gear: Full boat cover, cockpit cover, cockpit tent, sail covers. Instruments, autopilot, GPS, VHF-DSC and multi-band radios. Twin batteries, charger and shore electrics. Custom galvanised heavy duty break-back trailer. All carefully maintained & wintered in boat shed. Excellent survey

£24,000
Telephone 07733 108922

HAWK 20 DAY BOAT

SAIL 101 all in REALLY VERY GOOD CONDITION. NEW MAINSAIL, Honda SHP, Breakback trailer 2004. (Easy to launch and recover, stiff, fast & fun). Centre-board refurbished 2014. Professionally copper coated 2006. Self-righting unsinkable seagoing day sailer. Yachting Monthly - "ROLLS ROYCE OF DAYBOATS" Full inventory/extras. ILL HEALTH forces sale



FOR SALE @ £11950 onno.
(New £30,000+) Tel 01327 340103 (Lying Rutland)

1985 German Frers 36



10.9m x 3.5m, 1985, Volvo Penta (2010) D1-30/130 S (150 hours); 2 cabins, 7 berths, hard wood interior finish, 3 sails, life boat (new), zodiac with outboard motor, bimini, spray hood, Marina

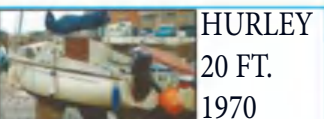
£23,000
Telephone +41 079 832 70 31
Email random.dubois19@gmail.com

Beneteau First 21 I



Launched 2000. Two owners since new. Excellent condition, based Ocean Village. Vector Sails by Hood, Spinnaker, Cruising Chute, Snuffer and ATN Tacker. Honda SHP on Teleflex control. Beneteau Mast lowering and raising kit with Mast transit Crutch Full Inventory. Since 2011 following replaced: Standing Rigging, Lifting Keel Pivot Bolt and L brackets. New lazy jacks installed. Sails regularly laundered and maintained by Doyle.

£12750 "Offers"
Telephone: 0148982884 Mobile: 07704421647
Email: dacom2@aol.com



HURLEY
20 FT.
1970

4 BERTH TWIN KEEL. GOOD CONDITION FURLING GENOA + 2 MAIN SAILS ORIGINAL LLOYDS CERTIFICATE (3262) SAIL POWER 4 - STROKE MERCURY OUTBOARD (2 YRS OLD) LYING ASHORE PAIGNTON HARBOUR
£3,200
TEL - 01803 293942/ wvwmonty@live.co.uk

NORTHWIND 41



Palawan 111 is a sea worthy cutter rigged sloop with an amazing amount of equipment which includes powered main winches, bow thruster, generator, heating, in furling Hood Vertech mainsail, furling Genoa and Gib. 6 berths in 3 cabins and everything needed for comfortable sailing with a small crew. Moored in Cartagena, Spain.

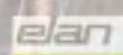
£79,000 ono
Telephone Glyn White 0034
968199506/ 669263485
Email - helenwhite522@gmail.com

SPRING BOAT SHOW

Sat 23rd & Sun 24th APRIL
10am to 4pm

Free entry!
Free parking!
Free catalogue!

Buying?
Over 50 boats on show
Ashore & Afloat!
Selling?
2 weeks free mooring
No sale - no fee!



Woodrolfe Brokerage
TOLLESBURY MARINA
Tollesbury, Essex, CM9 8SE
www.woodrolfe.com 01621 868494

Wooden Boat Project

26ft canoe-stern wooden yacht, built in 1948 by Brooke Marine. Lovely project boat. Bermudan Rig. Located in Hullbridge, Essex. Online gallery and video here: <http://bit.ly/projectboat> 07949536226 matt@wilkinsdesign.co.uk
£900

Pioneer 9 metre

30 ft sailing yacht with 10 hp Volvo aux. (1988) built in GRP in UK in 1964 to a V de Stadt design, with 4 berths - lying Chichester. **£4,500**
Tel: 020 8668 2925
Email: johnw148@ntlworld.com

MARINE EQUIPMENT

Spare parts for...

British Seagull

www.britishseagull.com

01491 652755

CRADLES



T: 01491 636293
E: sales@yachtlegs.co.uk
W: www.yachtlegs.co.uk

Yacht Cradles

- Galvanised steel
- Stackable
- Transportable
- Suitable for 22' - 55'

Motorboat Stands

- Stackable stands for motor cruisers

Yacht Legs

- Stowable, telescopic aluminium legs for motorboats/yachts

THE JACOBS YACHT and boat cradle LTD. All sizes and types of craft catered for. Probably the best designed and versatile cradle made. Tel: 01394 448253. Fax: 01394 448408. Email Forgejacobson@tinyworld.co.uk www.jacobsboatcradles.com. Alternatively send for a brochure. E. Jacobs & Sons, The Forge, Kirton, Nr Ipswich, Suffolk IP10 0NU

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

M:DUFF

TIME FOR CHANGE

Celebrating **60** years of MGDUFF with a new look



As the leading sacrificial anode manufacturer and supplier to celebrate 60 years of MGDUFF we have a new state of the art website. Built as mobile first it's fully responsive allowing mobile and tablet users to fully utilise the site. You will notice the home page is now split into 6 categories that define MGDUFF's business and help you get to the right product you need and quickly. As well as being the brand leader for

Yacht & Power Boat sacrificial anodes our Commercial Marine and Inland Waterways market is a large part of our business. Many people may also be unaware that MGD (a division of MGDUFF) is the largest installer of Altro hygienic Wall Cladding & Flooring. If you're looking for a unique coating system that can be thought of as a liquid anode check out our separate site for Zinga.



Telephone: +44 (0) 1243 533336

Website: www.mgduff.co.uk

Email: sales@mgduff.co.uk

1 Timberlaine Estate, Gravel Lane, Quarry Lane,
Chichester, West Sussex,
PO19 8PP

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

BERTHS MOORINGS & STORAGE

PONTOON BERTHS & SWINGING MOORINGS

CHICHESTER HARBOUR
2016

Tidal pontoon berths

£260.00 per metre per annum

Swinging moorings

£450 - £1045.00 per annum

From 1st April to 31 October

HAYLING YACHT CO LTD

TELEPHONE 02392 463592

EMAIL INFO@HAYLINGYACHT.CO.UK WEB HAYLINGYACHT.CO.UK

Quay Lane Boatyard

in Historic Portsmouth Harbour

Annual Swing Moorings
from £420 per annum
starting April 1st.

Pontoon Berths £1.18 per
foot per week.

Storage Ashore available.
See Website for details.

www.quaylaneboatyard.co.uk
02392 524214



LAKE DISTRICT ULLSWATER

Swinging moorings available
Contact Jennifer Little at Dalem Estate Office
Tel: 01768 486450
Email: admin@dalemain.com
www.dalemain.com

Portsmouth Harbour Berths

Upper Quay, Fareham, Hants.
Secure pontoon berths.
Semi-tidal
Pontoon access at all times
Water & electricity
From £38 per ft p.a.

Upper Quay Marine, 6 Upper Wharf
Tel: 07973 690557 or 07712 189444
upperquaymarine1@gmail.com

WEIR QUAY BOATYARD

DEEPWATER MOORINGS
ONE STOP FOR ALL MARINE TRADES
www.weir-quay.com - 01822 840474

NO BOAT NEEDED

HOO NESS YACHT CLUB

welcomes boat owners
and NON boat owners to enjoy
yacht sailing and crewing in the
Medway and beyond
Call Gary today and see what benefits
membership can give you.

07702599113
www.hooness.org.uk

FENDERING



FenderSock Kits

One kit covers up to six fenders
Two sizes fit the majority of fenders
Ten different colours to choose from
Easy to make - no sewing required

Small kit
£28.50
+ UK P&P £5.40

Large kit
£36.50
+ UK P&P £5.90

www.fender-socks.co.uk
Email: sales@fender-socks.co.uk
01782 392270

LIFE RAFTS

**LIFERAFT
AND EPIRB
HIRE**



Send for our FREE
info pack and depot list
**0800
243673**
www.liferafts.com
info@liferafts.com
Fax: 01621 785934
LIFERAFT & DINGHY
SERVICING
Liferaft House
Burnham-on-Crouch
Essex, CMO RTE
THE WORLD'S LARGEST
DEDICATED LIFERAFT
HIRE COMPANY

RIGGING

LEATHER WHEEL COVERINGS

• For all wheel sizes and sprayhood grab rails
• Leather Spinner pole covers
• Handy Pull Taps to open Shuttles
• Suppliers of Marine Leathers to Sailmakers & Riggers
Clyde Marine Leather
www.clydemarineleather.com
Tel: 01418814558

BOAT NAMES

SAC BOAT NAMES

www.sacboatnames.com
post@sacboatnames.com

01384 443744

Trade Enquiries Welcome

Names | Tapes | Decals | Canalia

Supplying Marine Graphics since 1988

MARINE ELECTRONICS

SeaRolf LED

Low power usage. Great light output. Many Filings
Direct replacement G4 MR11 MR16 Festoon B22
Edison screw Navigation and MORE.....



www.searolf.com Tel. 01283 542718
CATALOGUES AVAILABLE

PROPELLERS

OVER 2000 PROPELLERS

- 2 & 3 Blade
- Alloy & Bronze
- Fixed & Folding
- Shafts & Seals
- Prop Protector
- Rope Cutter



SILLETTE MARINE PROPULSION
sales@sillette.co.uk www.sillette.co.uk
020 8337 7543

SPARS & RIGGING

SPARS AND RIGGING

SELDÉN

FURLEX

Z SPARS

SALES & SERVICE WORLDWIDE

CRUSADERSAILS.COM

Tel: +44 (0) 1202 670580

E-mail: info@crusadersails.com

CHARTS

Charts and Tides
co.uk
software

Funky Monkey

funkymonkeyboatnames.com

Design online at your
One stop boatname shop
Boatnames, Hull graphics,
SSR Numbers & more.
WE ARE INDUSTRY SUPPLIERS
Contact us | 01590 671974

TILLERS & RUDDERS

**TONY
MACKILLICAN
.CO.UK**

Rudders & Tillers made
to your requirements
Tel: 01785 284949

SURVEYORS

**East Anglia
Yacht Surveys**

Dominic Buckley AssocIIMS
Pre-purchase and insurance surveys
for GRP, wood and steel vessels.
Tel: 01603 717823 / 07981 247107
eays@btinternet.com
www.eastangliayachtsurveys.co.uk

Robert J. Perry, I.Eng.

AMIMarEST Marine Surveyor
South west marine surveyor I.Eng.
AMIMar.E, pre-purchase / insurance /
damage surveys.
Robert J Perry, Lyme Regis.
Tel: 01297 631314. Fax: 01297 631409
enquiries@robperymarine.co.uk

**Practical
Boat Owner**

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

INSURANCE

Is your boat insurance due?

Then make sure you get a quote from us

Everything you need

One of the most comprehensive policies on the market.

Outstanding claims settlement

When it comes to claims settlement our reputation is second to none.

Incredible value

Our boat insurance costs less than you think.

For an instant quote and same day cover

0151 473 8000

Call Monday to Friday, 9.00am to 5.30pm

GJWDirect

The UK's Largest Direct Boat Insurer

gjwdirect.co.uk

Authorised and regulated by the Financial Conduct Authority

NOT ON
COMPARISON
WEBSITES!

The Specialists



craftinsure.com

**Top Quality Boat Insurance
for complete peace of mind**

**The UK's first online boat insurance provider.
Created by boating people for those who
love their boats!**

- Quick and easy online quotations and cover
- 24 hour claims help line and simple online claims tracking
- Monthly payments for premiums over £100 at NO EXTRA COST!
- £5,000,000 Third Party liability cover
- Multi-boat insurance discounts - insure two or more boats for less
- Underwritten by Navigators Et General
a trading name of Zurich Insurance plc

**www.craftinsure.com
or call: 03452 607888**

Authorised and regulated by the Financial Conduct Authority

Saga Boat Insurance



Whatever vessel you own, make sure it's properly protected against unexpected mishaps, in and out of the water.

- Agreed value insurance
- Up to £3 million third party liability
- Cover for loss or damage while your vessel is in transit.

If you are 50 or over, call

0800 559 3194

stating reference GP2527

saga.co.uk/boat



CSA-TR0825

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

INSURANCE

Why splash out more than you need to on boat insurance?

With our fast, online quote builder you can shape your insurance quote entirely around you and your boat.

Plus:

- Save up to 25% with our no claims discount
- Enjoy 0% APR on monthly payments
- Lowest Price Guarantee

Get an instant quote today, visit:

www.insure4boats.co.uk/PBC36

Or call our UK based Customer Service team on 0800 668 1661 (quoting PBC36)

Insure4Boats is a trading name of JRW Group Services Ltd which is Authorised and Regulated by the Financial Conduct Authority No. 313411. Terms and conditions apply. See website for details of Lowest Price Guarantee conditions.

Insurance underwritten by LLOYDS

insure4boats

Driving on a Budget?
PLEASURECRAFT INSURANCE
Traffords LIMITED
www.traffords-insurance.co.uk
 Telephone: 01525 717185
 Email: info@traffords-insurance.co.uk

BASIC BOAT LIABILITY COMPANY
 UK'S NUMBER 1 MARKET LEADER
 IN BOAT LIABILITY INSURANCE

- THIRD PARTY LIABILITY • NO EXCESS •
- £5M LIABILITY • £50K WRECK REMOVAL •

03333 219 430

WWW.BASIC-BOAT.COM

THIS COMPANY IS PART OF HOWE MAXTED GROUP LIMITED WHO ARE AUTHORISED AND REGULATED BY THE FINANCIAL CONDUCT AUTHORITY

Quality Low Cost Marine Insurance Quotation in 5 Clicks and 30 Seconds

insurance-4-boats
 .co.uk

Our name says it all!

For quick, instant quotations and cover for all type of marine craft contact us on:

www.insurance-4-boats.co.uk

Telephone: 01656 784866

Fax: 01656 784872

quotes@insurance-4-boats.co.uk

Insurance 4 Boats.co.uk is a trading style of Portofort Insurance Consultants (UK) Ltd. P.C. is authorised and regulated by the Financial Conduct Authority. All telephone calls are recorded.

PERSONAL

Date-A-Sailor
 .com

Whether you're Captain or Crew, prepare for the new season NOW and bag yourself a Great New Shipmate Today!

Date-A-Sailor.com

SHUT YOUR TRAP

Catch lobsters, crabs, prawns etc in our folding traps & creels.

See the range at

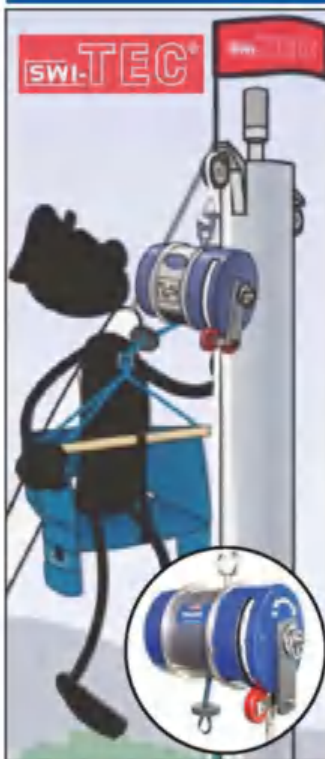
www.interextrading.com or

www.yachtypots.com or

email info@interextrading.co.uk

Tel: 01254 703 516

ELECTRONICS



SWI-TEC Mastlift
 for a safe mast climbing

www.swi-tec.com

info@swi-tec.com

CREW WANTED

CrewSeekers
 International

THE ORIGINAL YACHT CREW AGENCY - ESTABLISHED 1980

We have a wide variety of exciting crewing opportunities worldwide, for amateur and professional sailors.

From daysailing to transocean.

All experience levels welcome.

Yacht owners register free.

Join online today at:

www.crewseekers.net

MARINE ENG & ANCILLIARY EQUIP

T. NORRIS LTD
 MARINE EQUIPMENT
www.tnorrismarine.co.uk

Tel: 020 8560 3453

Fax: 020 8569 7446

**6 Wood Lane,
 Isleworth,
 Middlesex.
 TW7 5ER**

PROPELLERS

Fixed & Folding - Manufacture, repair & repitching - Steam engine propellers

SHAFTS

Stainless steel shafts made to order

STERN GEAR

Stuffing boxes - Cutless bearings - Epoxy tubes
 Plummer blocks - 'P' Brackets - Deep Sea Seals -
 Gland packing - Remote greasers

GEARBOX SPARES & REPAIRS

P.R.M. - HURTH - BORG WARNER
 Hydraulic Steering - Flexible Drive plates - Impellers &
 Spares - Elastomuffs - Flexible Engine Mountings

OUR WORKSHOP

We have full workshop facilities for repair and manufacture to your requirements

EXHAUST SYSTEMS

Waterlocks - Goosenecks - Silencers -
 Exhaust Hose - Hose Clips - Anti Siphon Vents

PIPE FITTINGS

Skin Fittings - Seacocks - Strainers - Valves -
 Hose Tails - Elbows - Tees - Plugs - Caps -
 Compression Fittings - Copper Pipe

ISO 7840

Fuel Lines - Fire Extinguishers & Blankets -
 Gas Hoses - Regulators - Fittings - Test Points

PUMPS

Engine Cooling - Bilge - Pressure Water System -
 Shower Drain - Sump Drain - Fuel Transfer

rule
 Controls
 Engines & Steering Controls & Cables

BOWMAN
 Controls & Boat Exchanges
JABSCO
 Pumps & Spares

WABCO
 Refrigerators & Coolers

STERLING
 PUMP PRODUCTS

NHMI

BUKH

AQUADRIE - CENTAFLEX - R&D

THE SHAFT KNIFE
 Propeller & Stern Gear Protector
EFFICIENT AFFORDABLE EASY TO FIT



Prices from
£65.00 + VAT

CALORIFIERS - TOILETS & HOSES - SOUND - INSULATION - FENDERS - FUEL/WATER SEPARATORS - ZINC & MAGNESIUM ANODES..... AND MORE

ALL PRODUCTS AVAILABLE FOR COLLECTION OR BY MAIL ORDER

OSMOSIS

osmosis repair/protection MOBILE
GEL COAT PEELING AND GRIT
BLASTING.

Your drying out problems solved with our **SUCCESSFUL SELF BUILD STEAM CLEANING KIT**, INFO AVAILABLE. No VAT. Diagnostic service and free advice for D.I.Y. Proven epoxy systems and expert assistance up to complete repair available with work record. **LYMINGTON AND CHICHESTER BASED.** For friendly advice covering all your gel coat problems please call **Adrian on: 02380 283135/ 07885 175 534** or **Jon (Chichester) on: 0754038 5366** www.advancedosmosis.co.uk advostech@gmail.com
FULL REFITS undertaken with undercover facilities Chichester.
Featured in PBO March 2012

South's leading osmosis centre



Using 5 HOTVAC machines to give faster, more efficient treatments
 Plus optional 5 year guarantee
 With full repair yard facilities also available

CALL 02392 463592
 or visit www.haylingyacht.co.uk

TRANSPORT



BOAT TRANSPORT BY SQUIRREL MARINE..... WITH JIM BRETT'S EXPERTISE

Based in Kent, moving boats throughout the UK
 Specialised personal service
www.squirrelmarine.com
john.jenkinson@squirrelmarine.com
 Jason 07446 821 333
 calls taken until 10pm every day

ANTI-FOULING

ANTIFOUL REMOVAL

Low pressure system, no damage to gel coat/epoxy. Grit blasting of keels available, gel peeling, osmosis treatments/repairs etc.

www.symblast.com

Tel: 01202387289 or

07957 655978

PLANS



BOAT PLANS

Catalogue with almost 400 designs for the home boat builder—canoes, dinghies, dayboats, yachts and launches—now on a CD as PDF files with many colour photos £7 + £2 p&p or visit our web site at

www.selway-fisher.com

CONSTRUCTION MANUALS

Stitch & Tape Boat Construction

Strip Plank Boat Construction

Clinker Ply Boat Construction

Plywood Boat Construction for Larger Craft

- all manuals £18 + £4 P&P each

SELWAY FISHER DESIGN

15 King St, Melksham, SN12 6HB

Tel. 01225 705074

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

ENGINES INBOARD/OUTBOARD



GENUINE PROTECTION FOR YOUR INVESTMENT

With genuine Volvo Penta parts, fitted by a trained and certified Volvo Penta engineer, your engine will remain fully protected.

Your local Volvo Penta centre has more than 100,000 marine parts & accessories, with live stock available and next day delivery.

To find out more about repair, service, warranties, parts and engines please call us on **+44 (0)1621 869756**



VOLSPEC

WOODROLFE RD
TOLLESBURY
T. 01621 869756

email: sales@volspec.co.uk www.volspec.co.uk

AUTHORISED
VOLVO PENTA CENTRE

MARINE ENGINES INBOARD

BETA MARINE

10 to 150 hp - 14 very smooth, multi-cylinder, heat exchanger cooled engines

We offer you the best, compact, reliable engines at very competitive prices!

Easy engine replacement, we can supply special engine feet designed to fit your boat

Engineered in the UK, at Beta Marine in Gloucestershire, we welcome your visit

Installation, buy through our dealer network for an installation package - see our website for dealer listings, or contact us

5 Year 'Self Service' Warranty

The Yachtman's Choice



www.betamarine.co.uk

Tel: 01452 723492 Email: sales@betamarine.co.uk

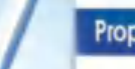
To advertise call the credit card hotline: FREEPHONE 0800 783 9683

SPARES

Genuine Beta Reliability
Genuine Peace of Mind

Tel: 01452 723492 • Email: spares@betamarine.co.uk

MARINE ENGINES INBOARD



Propulsion engines - 17 - 272 bhp

Compact, reliable & easy to maintain

Generators & full installation kits available

5 Year warranty with International Dealer network





Engines Plus Ltd. Unit 11, Tails Hill Industrial Estate, Dursley, Glos, GL11 6BL
 Tel: 01453 547273 · Fax: 01453 547002 · sales@enginesplus.co.uk · sole-diesel.co.uk

BOAT SCREENS & WINDOWS

WINDOWS • HATCHES • SCREENS • WASHBOARDS

PERSPEX • ACRYLIC • POLYCARBONATE – CUT PANELS OR SHEETS
FORMED • DRILLED • SHAPED – TO YOUR REQUIREMENTS
CLEAR • TINTED • MIRRORRED
NEXT DAY DELIVERY UK

SUNLIGHT PLASTICS LTD

Units 15 and 16, Aston Road, Waterlooville, Hants PO7 7XG
Website: www.sunlightplastics.co.uk Email: sales@sunlightplastics.co.uk
Tel: 02392 259500 • Fax: 02392 259400

We are based
in the **SOUTH WEST**
and supply replacement
BOAT WINDOWS
WASHBOARD - HATCHES
vinyl pinsripes - boat names
contact us **01752 266599**
info@nusignmarine.co.uk
www.nusignmarine.co.uk

PLASTIC BOAT WINDOWS
ACRYLIC • PERSPEX • POLYCARBONATE
CLEAR AND TINTED IN VARIOUS THICKNESSES
SCREENS • WASHGUARDS • HATCHES
WINDOWS AND INSTRUMENT PANELS
CUT TO SIZE AND SHAPE • DRILLED
REVELLED AND MOLDING FACILITIES: UP TO 5m x 2m.
QUICK TURNOAROUND
www.projectplastics.co.uk
PROJECT PLASTICS LTD.
T. George Way Business Park
Widenedale, Doncaster, South Yorkshire
Tel: (01206) 868695 Fax: (01206) 793737
email: projectplastics@btinternet.com

BUSINESS FOR SALE

FOR SALE

Mallorca Yachting business
Marine engineering, repairs,
maintenance & guardianage
28 Boats 6-20 metres sail and
power, including charter fleet
Yacht cleaning, Mobile work-
shop & chandlery

Turnover in excess of €350.000

Owner retiring and wishes to sell at reasonable price to persons

that will continue the business

Email:

smchartermallorca@gmail.com

SeaClear marine windows
renovation specialists

■ boat hatches ■ windows ■ port lights ■
■ windscreens ■ washboards ■
■ cruisers ■ sports boats ■ yachts ■

Mobile: 07761 882526 Office: 01622 205837
www.seaclear.co.uk ■ sales@seaclear.co.uk
Established workshop ■ Maidstone ■ Kent

Practical Boat Owner

GLASSFIBRE & SHEATHING



**East Coast
Fibreglass Supplies**

- Over 3,000 products in stock
- FREE Friendly Expert Advice
- Great Prices, FAST delivery
- Over 45 years experience
- Everything you need in one place

5% Off!
Use Code
PBO14

Online • Phone • Trade Counter
www.ecFibreglassSupplies.co.uk
0191 497 5134



01209 821028
FIBREGLOSS



**COAT
STRIP
POLISH
BOND
PAINT
CLEAN
RENOVATE
REINFORCE
LAMINATE
REPAIR**

CFSNET.CO.UK

USE CODE PBO194 for ~~40% OFF~~ **40% OFF** ONLINE OR TEL

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

MARINE ENGINE PROPELLERS



- SMOOTH PROPULSION WITH GREATLY REDUCED NOISE
- GREATER STOPPING POWER
- REDUCED VIBRATION
- HUGE REDUCTION IN 'PROP WALK' WITH ALL TYPES OF HULL/KEEL DESIGN
- DRAMATIC IMPROVEMENT IN REVERSE CONTROL
- SMOOTH PROPULSION INCREASING HELM RESPONSE AND VESSEL HANDLING THROUGH THE WATER
- IMPROVED MOTOR-SAILING PERFORMANCE
- PRECISE HANDLING IN SHALLOW WATER, MARINAS AND MOORING
- FUEL CONSUMPTION REDUCED BY UP TO 8%

TEL: +44 (0)1832 730 457

WWW.AXIOMPROPELLERS.COM

INFO@AXIOMPROPELLERS.COM



DEVELOPED AND PRODUCED
FROM THE UNITED KINGDOM.

**SPECIALISTS IN MARINE PROPULSION
AND PROPELLER DESIGN.**

AXIOM PROPELLERS LTD.

BOAT JUMBLES

KENT BOAT JUMBLE- SUNDAY 6th MARCH

The Hop Farm, Paddock Wood,
Tonbridge, Kent.TN12 6PY. (J4 M20 & J5 M25) Entry £4.00

NORTHERN BOAT JUMBLE - SUNDAY 13th MARCH

Brookfield Farm, Sproston Green.

Holmes Chapel, Cheshire, CW4 7LN. Entry £3.50

DORSET BOAT JUMBLE - SATURDAY 26th MARCH

Canford Park Arena, Magna Road,

Poole, Dorset, BH21 3AP. Entry £4.00

Car Boots/Boats from £20; Stalls from £35

Chaddock & Fox Promotions:

023 92381405 - 07887 771451.

boat-jumbles.co.uk

Boat Jumbles Humberside

**Brilliant
New
Venue!**

Sunday April 17th

Lightstream Stadium

Preston Rd, Hull HU9 5HE

All hardstanding event

Gates open 10am ** Adults £3.50

Children/parking free

Diary Dates 2016

Devon (Newton Abbot Racecourse)

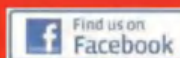
Saturday May 28th & Saturday September 10th

Humberside

Sunday 25th September

South Wales

Sunday October 16th



**Bring a car boot of
nautical bits or a boat to sell for just £20**
Call Compass Events 01803 835915
www.compasssevents.co.uk

**DON'T MISS THE
NORFOLK BOAT JUMBLE**
NORFOLK SHOWGROUND
NORWICH NR5 0TT
A47 Norwich Southern Bypass

SUNDAY APRIL 3rd
Opens 10am

Serving the Coast, Broads and Fenland Waterways
ADMISSION ONLY £3.50
Children/Parking Free
All Enquiries - Roger Bell 01485 541566

**Practical
Boat Owner**

TRAILERS & TROLLEYS

LAUNCHING MADE EASY



Don't struggle with
reversing your boat
A Front Towbar greatly
increases your ma-
noeuverability and
visibility

- Clear view in front
- Detachable
- Strong
- Available for many vehicles

To fully appreciate
the difference a
front towbar makes,
visit our website for a video demonstration:
www.watling-towbars.co.uk

For more information
call PAUL on:

01727 873661

Watling Engineers Ltd.

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

Discover a world of sailing with Kiriacoulis



First for sailing holidays in the Mediterranean.
The finest yacht charters at the best value for money.

Charter in Greece, France, Turkey, Italy, Malta, Croatia or the Caribbean.

MAIN UK AGENTS

Nautilus Yachting

The Watermill,
87 High Street,
Edenbridge,
Kent
TN8 5AU
t: 01732 867445
e: charter@nautilusyachting.com
www.nautilusyachting.com

Tenrag Yacht Charters Ltd

Tenrag House,
Preston, nr. Canterbury
CT3 1EB
t: 01227 721874
e: info@tenrag.com
www.tenrag.com



www.kiriacoulis.com

DRASCOMBE LUGGER SAILING IN THE GREEK IONIAN

Day sail in the sun these "iconic" Drascombe Luggers based at **THE GENI GARDEN APARTMENTS**, our superb waters edge base and explore the wonderful harbours and coves of Meganissi.

Early booking discounts for Lugger / Apartment packages now available
www.dragondrascombe.com



SEAFARER

CRUISING & SAILING HOLIDAYS

FLOTILLA SAILING
BEACH CLUB HOLIDAYS
YACHT CHARTER

GREECE • TURKEY • CROATIA • CARIBBEAN



020 8324 3118



www.seafarersailing.co.uk

To advertise call the credit card hotline: **FREephone 0800 783 9683**

YACHT CHARTER



sailingholidays.com®

020 8459 8787



BareboatSailingHolidays.com

020 8438 1133

Flotilla sailing holidays in the Greek Islands or independent charter in the Mediterranean



SAILING SCHOOLS

YACHTMASTER OCEAN INSTRUCTOR
AVAILABLE FOR TEACHING
ALL RYA COMPETENCESAll levels of navigational theory taught
Boat deliveries, own boat tuition, experience cruises, both on
sailing yachts and motor cruisers, organised.

All RYA practical courses covered.

STICKY STAPLTON
instructor@sail-help.co.uk
www.sail-help.co.uk

Weston Bay Yacht Club

Cruise the Bristol Channel
or relax in our refurbished
clubhouse near
Weston super Mare. Member's
moorings on River Axe
available - £190 pa
(including membership)Visit our website :
www.wbyc.co.uk
info@wbyc.co.uk

ADVENTURE HOLIDAYS

Greek Islands Adventure

Mystic Cruise to lands of Odysseus.
Comfortable Catamaran max 4 guests, low cost
May 1-Oct 5 sailcatgreece@gmail.com

CHARTER

Bob's Yachts

Bareboat & Flotilla Sailing
from Corfu in the IoniansFeel at home aboard one of our
Sun Odyssey's 32-49'. Our high standards
and personal touches gained from experience
over the last 25 years, will ensure you are**"A cut above the rest"**

Please visit our website

www.bobsyachts.gr orEmail us at: boblitsa@otenet.gr

or call us on:

FREEPHONE 0800 011 2940

Tel/Fax: 0030 2661 094104

East Dorset Sailing Club
in Poole harbour has a
friendly and family
atmosphere. EDSC has
mooring for sailing craft
available up to 10 meters
long and "drying and
non-drying" swinging trot
moorings. Apply to Hon
secretary, 352 sandbanks
road, Poole, BH14 8HY or
visitwww.eastdorsetsailingclub.co.ukHOYLAKE SAILING SCHOOL
MERSEYSIDE

5 DAYS OR 2 WEEKEND THEORY COURSES

Dayskipper • Coastal Skipper

Yachtmaster Offshore •

Yachtmaster Ocean

STCW Master <200gt

ONE DAY COURSES

Diesel Engine • VHF • Radar

First Aid • Sea Survival

www.sailorsworld.co.ukMARINE HOUSE, 86A MARKET STREET,
HOYLAKE, WIRRAL, MERSEYSIDE CH47 3BD

0151 632 4664

reception@hss.ac.uk

BOAT SHARE

Middle aged sailor looking for 2 or 3
partners to form new boat share this year.
Potential partners should be competent
experienced sailors willing and able to
invest up to £20k to buy and maintain a
second hand sailing boat (up to 12 me-
tres) to be based in or around the Solent.
All enquires will be treated in confidence.
Please call or text Paul on 07496 666434

Yacht Fractions Ltd (est.1991)

The Yacht share specialists.

Shares for sale used and new boats
New boats supplied for private or shared
ownership or Charter management

Bavaria, Beneteau, Jeanneau.

UK and Med.

www.yachtfractions.co.uk

01326 374435

Solent Based Sailing School

RYA Theory and Practical courses • Solent Charter

Competent Crew • Day Skipper • Yachtmaster • Boat Handling

Milebuilding • Own Boat Tuition • Online Theory

www.commodore-yachting.comTel: 02392 504443 info@commodore-yachting.com

YACHT AND BOAT DELIVERY



- UK, France
- Spain, Scandinavia
- Boats 20'-50' long

Tel: 07831 486710 (Mon-Sat).

www.boattransport.co.uk

- Specialist boat haulier
- Modern purpose built equipment
- Europe wide destinations
- Boats from 7 to 18 metres
- Competitive prices
- Professional and dependable service

Tel: 02380 710976

Mobile: +44 (0)776 420 0555

info@oceanboattransport.comwww.oceanboattransport.com

SEALAND BOAT DELIVERIES LTD

Nationwide, Continental, Worldwide
for 40 years. No weight limit. 24hr
Lancashire Ops room. Tel: 01254
705225. ros@poptel.org
www.btx.co.ukPractical
Boat Owner

NEW GEAR

PROPELLER ANTIFOULING

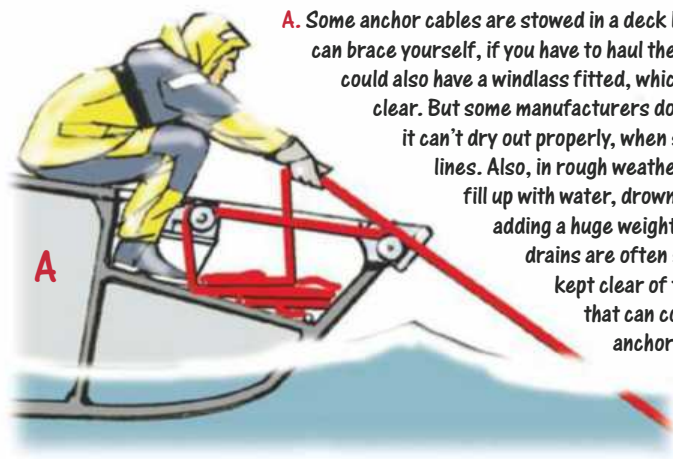


- Suitable for propellers, shafts, rudders, trim tabs, outdrive legs etc.
- Compatible with all metals, composites & painted surfaces
- Eradicates barnacles, coral worm & hard growth
- Saves fuel & maintains vessel's speed
- Prevents electrolysis & oxidation
- Active up to 1 year
- Eco-friendly & biodegradable
- Unique, biocide free formulation
- 2 application methods • Water insoluble
- also prevents weed growth (depending on usage)

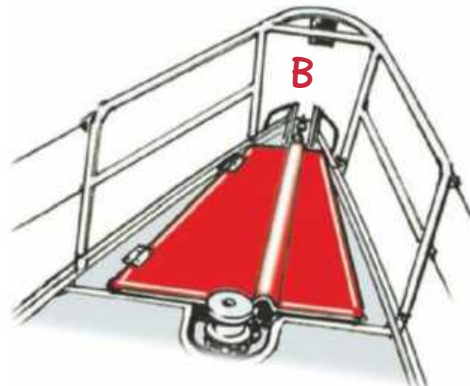
Buy online or from UK outlets • Trade enquiries welcome!
www.prop-shield.com Call: 078 5403 4480

To advertise call the credit card hotline: FREEPHONE 0800 783 9683

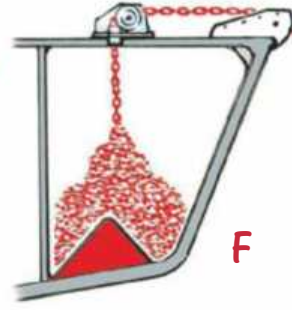
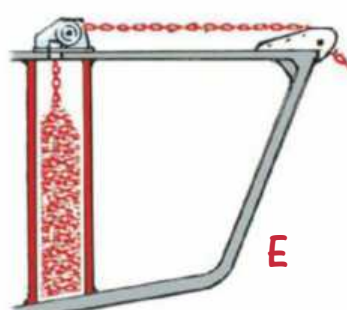
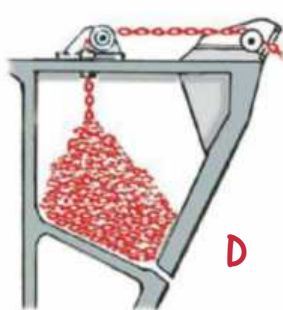
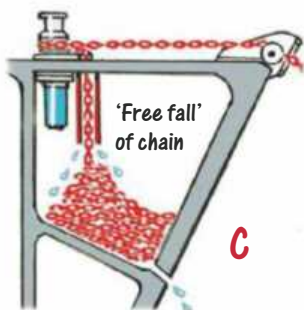
Taking a close look at anchor locker design



A. Some anchor cables are stowed in a deck locker, where you can brace yourself, if you have to haul the cable in by hand. It could also have a windlass fitted, which keeps the deck clear. But some manufacturers don't like this, because it can't dry out properly, when surrounded by wet lines. Also, in rough weather the locker might fill up with water, drowning the windlass, and adding a huge weight to the bow. Locker drains are often small, and need to be kept clear of the mud and weed that can come in with the anchor cable.



B. This locker lid has a tunnel for the chain, so the lid can be opened at anchor. There have been problems when a second anchor was needed, and it was trapped in the locker, because the chain passed over it.

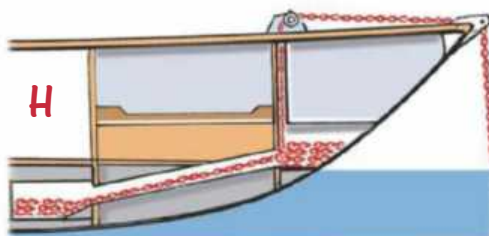


C. Internal lockers need quick access, just in case the chain jams. Some vertical windlasses, or capstans, need quite a 'free fall' of chain to keep it flowing off the gypsy. A plastic chain pipe can help to keep the splashes off the motor. **D.** Horizontal windlasses often need less 'free fall' of chain.

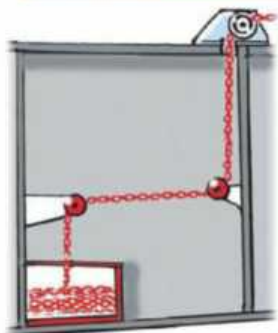
E. Some people reckon that tall thin lockers, like those used on ships, are less likely to get a cable jam. But, because it puts a high weight near the bow, the chain might have to be flaked, or faked, back along the bilge on long deep-water voyages. **F.** Slopes and cones have been tried to stow the chain evenly.



G. With a big open chain locker, a crewman can stow the cable more evenly, using a stick. On ships, matelots were often showered with muck and rust!

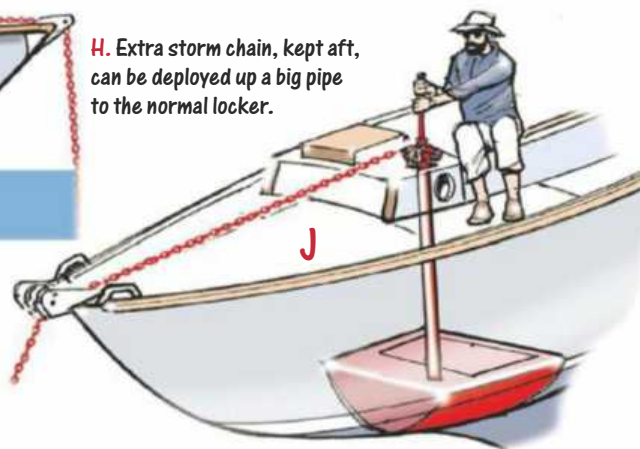


H. Extra storm chain, kept aft, can be deployed up a big pipe to the normal locker.



I

I. Moving the weight of the chain aft slightly can improve the handling of some boats. This one used a couple of big stemhead rollers to do it.



J. A few boats have mounted manual windlasses on a strong coachroof. This gets the stowed chain weight aft, and makes for a more comfortable winching position.

Original Boat Owner's Sketchbook volumes 1 to 5 are now available to download from www.pbo.co.uk/sketchbook priced at £4.95 each. A limited number of printed volumes 3, 4 and 5 of the original Sketchbook series are still available from the PBO Editorial office priced at £3.75 each, or all three for £10. Order yours by calling tel: 01202 440830 or email: pbo@timeinc.com

PUZZLE SOLUTION: North Cb1, East Ba4, South Dc3, West Ad2

THE NORTHWEST PASSAGE

Les and Ali Parsons,
"Arctic Tern"
in the challenging
North West Passage
fully equipped with
Crusader Sails.



Whether it's the North West Passage or your local estuary, Crusader Sails build your sails to the same high specification using the experience gained from the millions of sea miles travelled by our sails, cut from the best quality materials available.

Call or email now for a competitive price and specification!

01202 670580

info@crusadersails.com



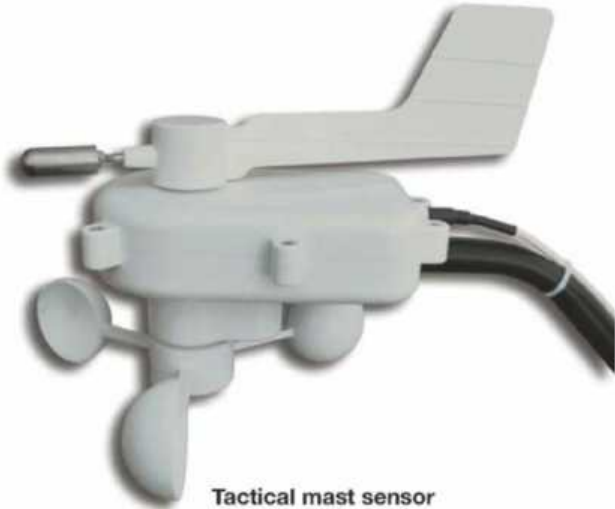
PROVEN RELIABILITY & PERFORMANCE

CRUSADER SAILS The Sail Loft Hatch Pond Road Poole UK BH17 0JZ
Tel: +44 (0) 1202 670580 E-mail: info@crusadersails.com Web: www.crusadersails.com

© Copyright Crusader Sails

NEW TACTICAL & WIRELESS WIND SYSTEMS

Clipper Tactical Wind System



Tactical mast sensor



Clipper True Wind display

In demanding conditions, where high performance is essential, the Clipper Tactical wind system is the ideal choice. With ten updates every second, changes in wind speed and direction which occur during tricky manoeuvres are shown almost instantly.

The mast sensor is supplied complete with a mast mounting kit, 20 metres of light weight cable and all necessary electrical connectors to complete the installation. The output data is in the NMEA 0183 format and can be used to drive any compatible display that utilises the MWV sentence.

True Wind display unit

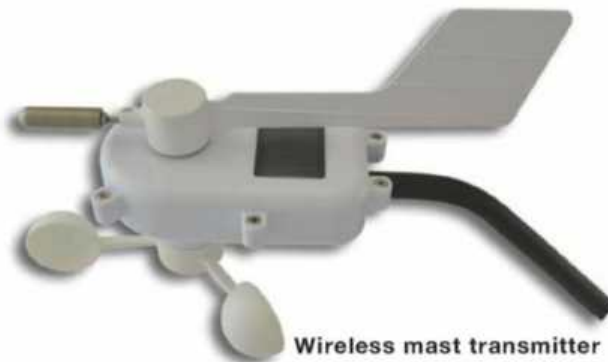
The Clipper True Wind Display shows apparent wind speed and direction, when connected to the NMEA output from a log or GPS, it will also show true wind speed and direction.

£270.00 inc vat

Clipper Wireless Wind System



Clipper Wind cockpit display



Wireless mast transmitter



Base unit

The popular Clipper wind display unit is now available with a wireless masthead unit. The wireless masthead transmitter is powered by an internal battery which is charged from ambient light using a small solar panel.

The masthead transmitter sends data wirelessly to the base unit, which is powered by the vessel's 12 Volt supply, the base unit receives wind speed and direction data from the masthead transmitter and sends it to the Clipper Wind.

Clipper Wireless wind is supplied with wireless mast unit, base unit and Clipper Wind display.

£349.20 inc vat

